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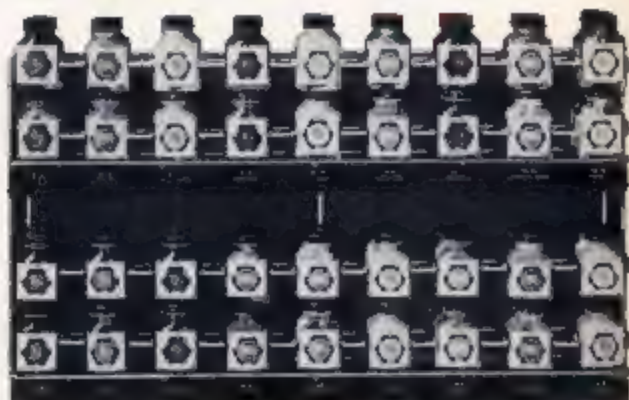
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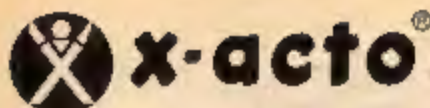
Volume 5, Number 4

April, 1967

ON THE COVER — I tell ya, 'tis a wonderful age we're living in! Six months ago you could have bought out the "Monkees" with the price of a non-union haircut. But, today, like Cheeta Baby, it can cost you \$6.50 to sit in the rear balcony and watch their hair grow! They're "in" and so's their wild rod!

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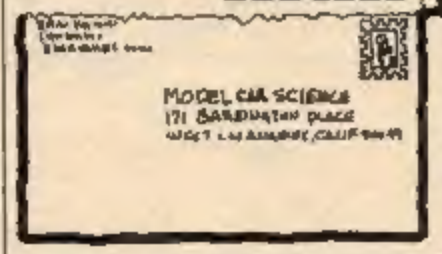
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WHICH SCALE IS BEST?

I'm really a friend for H. O. racing, but I need help. I used to have a couple of 1/24 scale cars, and I went pretty good too. When I switched to H. O., my friends called me nutty. You answer for me, please. Which scale is better — 1/24, 1/32, or H. O.? Donald Maxwell Lockport, Ill.

This is probably the easiest question to answer we've had so far, Don. The scale that is the best, is the scale you are happiest with (How's that for an out!!) If H. O. "turns you on," man, that's the best scale for you! If your friends get their jollies from the 1/24 scale machinery, they should stick with that scale. Just tell them to "bag their head" and race what they like!

THIS VOLTAGE MIXUP

Would you please put me right on this point? Here in England, we have a standard voltage for slot cars, which is 12 volts D. C. I've noticed in your great mag that many motors are referred to as 3, 6, 8, and 9 volt motors. Are these motors still run off the regular 12 volts? And if so, what happens to an "8" volt motor, when it is run on 12 volts?

Graham Bolton
Borehamwood, Herts, England
Well, this "6 volt" routine is really erroneous, Graham. When you read of a motor that is billed as a "3" volt-er, for instance, it really means that it has been rewound to draw more current from a 12 volt power supply. We're trying to introduce the ohm rating as the guide to follow, which would give the customer, or enthusiast, a lot more information. "6" volts doesn't really tell a fella much!

H.O. AGAIN

I am new to H. O. racing. I quit racing 1/24 scale and decided to build a swinging H. O. layout in my basement. What kind of cars should I use for little newcars, and other machines

to fill a parking lot or pit area? Where can I get them?

Eddie Wellman
Amarillo, Tex.

Eddie, sounds like you and Don Maxwell (see the first letter) have a lot in common! Pity you're so far apart. Anyway, the "Matchbox" series, and Strombecker's "Tootletoy" line should fill the bill for you. Also, the "Dinky" line is readily available. You should check your local toy stores, or even the dime stores. Most of them carry at least the "Matchbox" line.

HERE'S A FREE TIP

Here's the perfect combination for obtaining that "Burnt Orange" finish on the Uncertain T. Spray AMT's Devil's Red Metalflake over their plain Black primer. Looks great!

Jan Mittelolndt
Phoenix, Ariz.

Many thanks, Jan. We're sure there are a lot of readers out there who can use this valuable tip.

PROPER GEAR RATIO

I just started reading your mag, and I dig it! I recently purchased a Globe Screamer SS-91. What is the best ratio for this particular motor? I am going to use it in an inline position. How many teeth for the spur gear, and for the pinion?

Alex Guriak
Brookhaven, Pa.

First of all, if you are going to use it in an inline position, you wouldn't use a "spur" gear, Alex. You'd use a "crown" gear. The spurs have straight cut teeth, and are meant to run in the same line as the pinion. A crown runs with the teeth meshing at right angles to the pinion. As far as ratios go, we don't know what type of track you will be running on, and that makes a great deal of difference. For a pretty good all-round ratio, try 3:1. We recommend an 8 tooth pinion, and a 25 tooth crown, such as Cox makes. This would give a final ratio (not counting tire diameter) of 3.125:1, which will give you blazing acceleration with that powerful motor, and excellent braking. The Globe already has good braking, and the small pinion will improve this even more. You may find that you'll want to go higher or lower on the ratio, but at least it's a good place to start from.

BRUSH PROBLEMS — THE "PAINT" KIND

I'm having trouble with my brushes. No man, not the motor type, the paint type! There are little pieces of hair sticking out all over the place, and it's impossible to do decent detail work. What's the matter with it? I clean it good after I use it every time.

Dale Robertson
Cheyenne, Wyo.

continued

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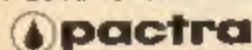
Also find out how to use slot cars in a 1967 CorBen Catalog

WINNERS



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You're using a cheap brush, Dale. Brushes are very important to good model building, so we advise that you buy the best you can afford. If you have an art store nearby, or for that matter, a regular paint store, they should have some good ones. You'll want a #00 or #000 for really fine work, and a number 1 or 2 for general work. They usually don't cost over 50c or 60c, and they're worth every penny!

SCENERY PROBLEMS

Your magazine occasionally runs articles on scenery building. Now, these articles are great, but there's one thing that bugs me. You keep mentioning "Perma-Scene". Chums, I've checked every store in the area, and there just ain't no such animal! I've tried plaster, but it's too messy! Help! You guys shouldn't tantalize a fella like that!

Mike D.
Cedar Grove, N.J.

Well, ol' Mike D., we really don't intend to tantalize you with goodies you can't get. But "Perma-Scene" does exist! We do know, however, that plaster is available anywhere, and it really isn't that messy to use. Try this. If you want to make a hill, just wad up old newspapers and lay them where you want the hill. Mix a soupy batch of plaster, and dip a paper towel into it. A regular paper hand towel, that

you buy in the grocery store, will work fine. Lift this out of the soup, and drape it over the newspaper. Position it where you want it, then let it dry. When the plaster is hard, you'll have a super lightweight "hardshell" surface, that costs peanuts, and looks good too. Spray the plaster with flat browns and greens (regular model spray enamel) for a "mottled" effect. Add a few trees and foliage, and you're in the scenery business!

HERE'S A GOOD TIP

Several times in your mag I have read questions from people wanting to know what to use for ignition wire. You suggested copper wire or thread. I have something better. I use solid nylon (clear) fishing line. It is a bit more expensive, but unlike thread and copper wire, you can bend this and it will not have any sharp kinks in it. It also is easy to paint, and glues easily. This line comes in various pound test strengths.

I hope this tip helps you and your readers, as much as it helps me.

Jimmy Pullen
Pleasure Ridge Park, Ky.

Great idea, Jim, and many thanks! Being an old fisherman myself, I do not know why I didn't think of that! Stroll into any fishing tackle shop, guys, and ask the man for some leader material. About 2 or 3 pound test would be fine.

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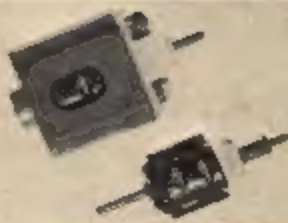
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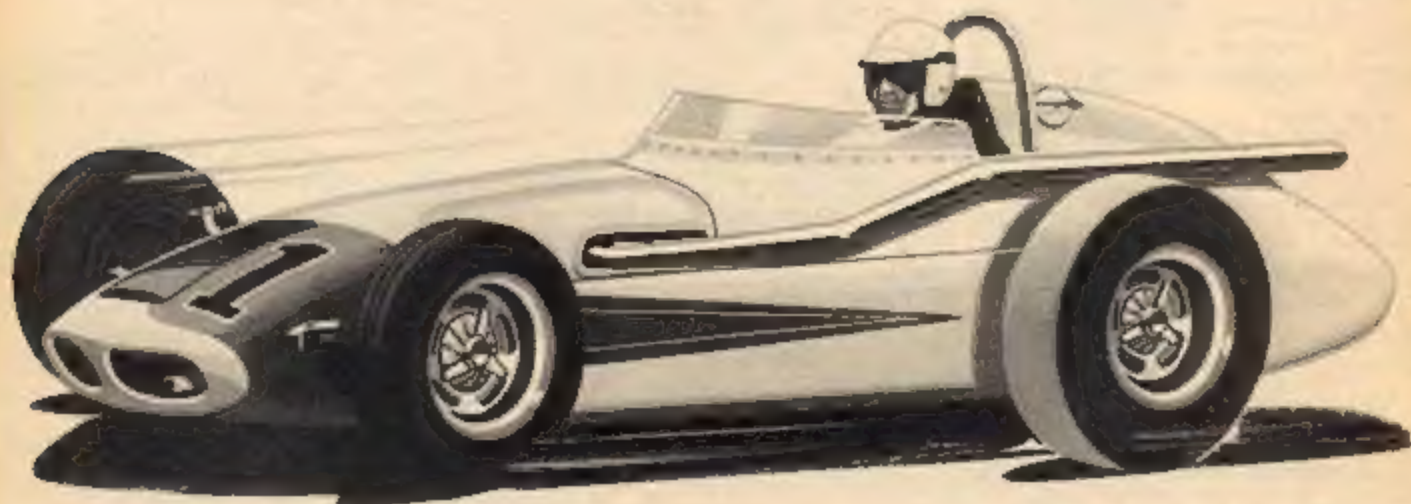
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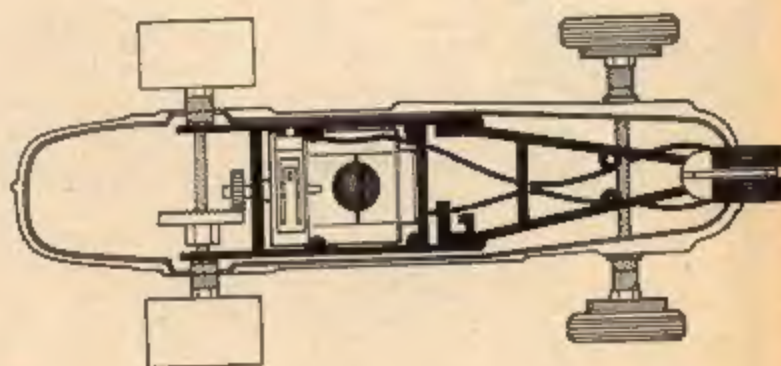
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**modelers'
QUESTION
SESSION**

By Don Emmons

Q I have a chopped Model "T" and would like to know where to get, or how to make, the slicks on the Uncertain ^{1st}. (Model on page 27 in Dec. '66 issue.) Where can I get the AMT '67 Camaro kit?

DON LOVE

Riverside, Calif.

A The slicks on the rear of that customized Monogram model are the ones that come with the kit. These are the stock tires of the real car and, likewise, it has only slicks for the rear. They are the same tires that Monogram has used in their last few rod kits.

The Camaro kit should not be a hard item to find at any hobby shop, unless they are out of stock. In that case, you can ask them to order one for you.

Q I'm building a 1966 Fairlane dragster and plan to put in a 1965 Falcon 260 cu.in. mill with a 6-71 GMC blower. Would this little motor in this big car make it look like it has power and make it BOSS? Where can I get a Ford 427 S.O.H.C. mill?

Are Canadians eligible to enter your model contest?

MURRAY YASTER

Yellow Grass, Sask.
Can.

A Personally, I think your model would look better with that big 427 SOHC Ford engine in it. You should have no trouble getting one of these en-

gines but you will have to buy a kit to get the engine as there are none sold separately. The various kits which contain this engine are: AMT's '67 Ford Galaxy, Mustang Funny Car; Industro-Motive's Ford GT; and PC's '67 Mustang Fastback kit. These engines are set up with injection or Weber carbs. You can get a blown SOHC 427 from the new AMT '33 Willys that will be available in the next month or so. As for the contest, everybody's welcome. Send your photos to the Contest Editor... he's very open minded; mainly because he's got a hole in his head!

Q I read your magazine and like it a lot. It is better than any other model magazine I have ever read. You have been very helpful with my model building.

I would like to know how to keep body putty from cracking when it is painted over. I puttied one car and sanded it down very carefully. Then I painted it and it cracked around the putty. How can I keep this from happening?
BILL CUMMINGS
B.H.A.F.B.
Peru, Ind.

A I don't know which type of putty you are using but it sounds as if you might be applying too much putty at one time and are getting "shrink" cracks. For large areas try puttied some and letting it dry, then apply more. After you have all this on you should file down the excess. When the puttied areas have been filed and sanded, spray on a few coats of primer and sand smooth again before painting. I think you will have better luck with this method. Just be sure to let the putty set up well before going ahead.

Q I like to build drag cars and have a couple of problems: 1) What kind of interior should be used on a drag car? 2) I like to use white Corduroy to upholster some cars. I used model cement but it seeped through the cloth. Which cement holds Corduroy to plastic?

DOUG WHITE

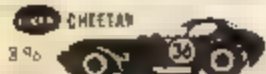
Elkhart, Ind.

A 1) You will notice that most drag cars have taken the upholstery out and the interior is painted with the matching color or is sprayed silver to simulate an

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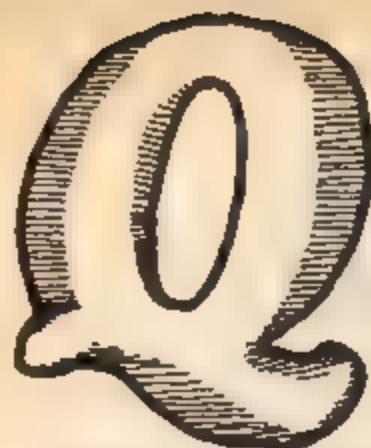
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modelers' QUESTION SESSION

all aluminum paneled interior. The door panels are usually left in place and can be painted a color to compliment the paint job of the exterior of the car. Remember that the use of flat colors work best for duplicating upholstery materials. 2) Corduroy or any other cloth can be glued to plastic interiors with Rubber Cement. Cut the Corduroy to size first and brush on an even coat of the cement. Put the

material in place and you're all set. If any cement does get on other parts, it can be rolled off very easily.

Q In the Dec. '66 issue of MCS, the "Detail For Real" article stated that toothpaste would remove scratches from clear plastic on model cars. Well, I tried it and all it did was to make a bigger mess and more scratches on the car window. This also happened on the bubble top on the bed of the pick-up end of the Deora. It's only in one spot, though. Then I tried the thinned black paint for grilles and it didn't seem to work well either. I didn't try it on the '67 Ford Falcon, but on some accessory grilles. What's my problem? Do you know? Can you help me?

DALE SCHAEFER
Sylmar, Calif

A I am sorry you had trouble with the toothpaste idea but am at a loss to know why. I have used the prescribed method on clear plastic windshields and other clear parts on almost all the models I build. It seems to give them a very clear finish

and takes off all the marks. I simply hold the part with one hand and rub a small amount of toothpaste on the part. Rub gently, but firmly, and then wash clean. This is all I do and have never had a problem at all.

I suggest trying the thinned black paint again. This time mix the two together and try it to see if it is about the right consistency. The only thing I can see that might have been wrong is that you had it too thin. If the paint is thinned down the right amount, it will flow very nicely. If it does not and covers up everything then it is too thick and should be thinned more. Likewise, when the part is dry and there is not much change in appearance you have thinned the black a little too much. Just keep testing on an old grille before applying to the good one. All the TIPS I show are tested and found to be correct before they are submitted. In fact, nearly all the techniques I've shown, I have been using for years in my model building. Good luck this time. Try the Tips again. Once you've gotten the hang of it, you'll be able to mix the paint the right consistency every time.

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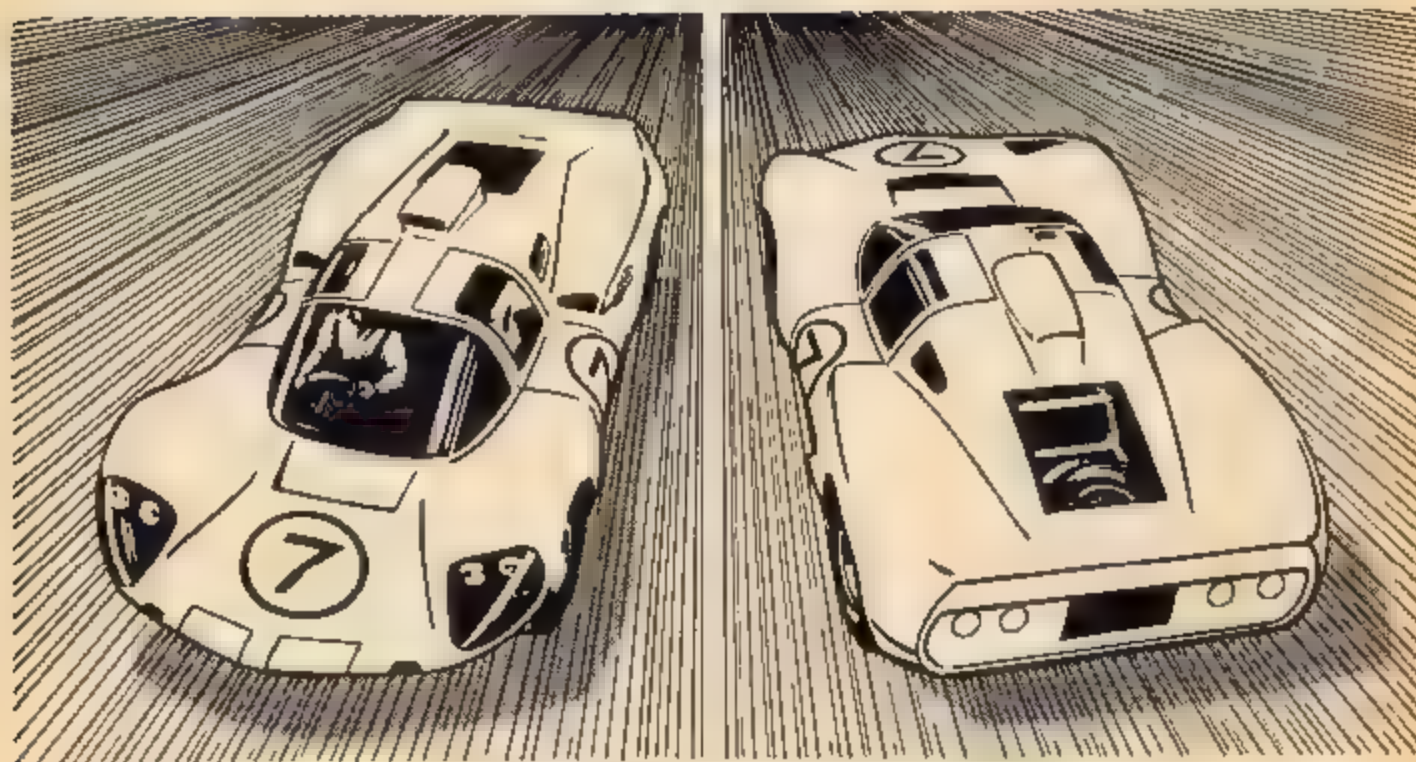
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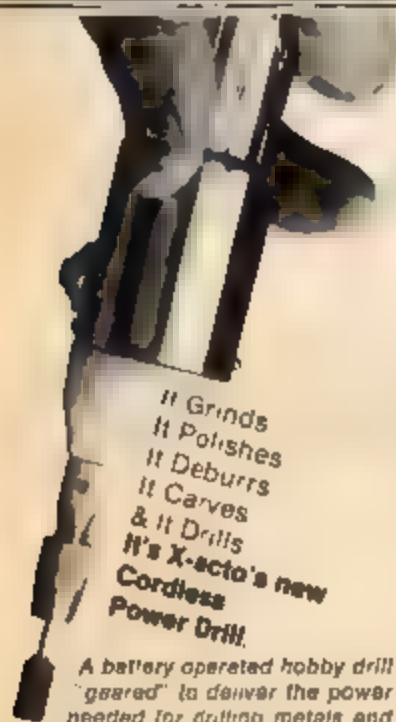
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By Speedy Gonzales
(Fastest Thumb in the West)

O! Speedy was buried as deep in his sloppy sarape as he could get, when I hit the fabled "Windy City" in the midst of the worst snow storm that midwest town has had in its history! A great place for a hobby show I wish the yuk-yuks who call the shots would move the show to someplace warmer next year!

A bunch of new goodies, however! Greatest news from the MRC hombres is their jazzy "Varipower" controller. \$11.98 and it's worth every peso! Dig this now — you get 7 settings, running from 5 up through 15 ohms. Very nice.

Cox did a double-take on their "Cucaracha" in 1/32 scale this time, using the X-50 motor for power. Yup, same Iso-Fulcrum chassis and all! Hmmm... But I liked their 2-E Chaparral better, high spoiler and all. RTR for \$12.98, or kit for \$9.98. The RTR, however, has the Iso-Fulcrum chassis; the kit has the adjustable mag job. Howcome? I don't personally dig builtup cars — they just don't do a good enough job of decaling them, and they're not even painted, so I buy kits. Well, no matter, a complete Iso-Fulcrum chassis is now available for just \$4.98.

K&B's looking very competitive these days with their "Kangaroo" chassis. \$2.98, and it takes a ton of motore! This is the goodie used in their sharp 2-D Chaparral RTR, for \$10.95. A bargain believe me, cause this one goes and handles too!

Pactra is loaded for bear this year with a great assortment of RTRs, from \$11.95 through \$19.95. Like their N.A.R.T. Le Mans Ferrari for \$14.95.

But on the subject of RTRs. There's no car worth \$19.95! Sorry baby, that's my opinion. I'll

qualify that a bit — not unless it's equipped with top grade ball bearings. When cars start inching toward the \$20 mark, I build my own.

Still on the slot racing kick, BZ's hitting the scale scene harder (yippee!) with a gorgeous BRM H-16 and a Watson Ford, 1/24 RTRs. \$13.95 each. Bodies are by Lancer, gears by Weldum, and they use latest micro-cell rear tires. And here too we find Hall's brutal looking 2-E for \$13.95. Same features, except it's built around the famous Banshee chassis, chromed yet. Sharp.

Pittman has squared off for more action with the new "hot" armature now standard equipment in the can motor. Same price as before though. How he do dat?

The '67 AMT 1/25 scale statics are simply scrumptious! Price is \$1.70 each. The Cougar hardtop turns me on! They've also got the "Hero" car from TV, and the Man From Uncle machine too. Smooth!

Sharpest of all, however, is AMT's 1/25 scale Piranha, the 200 mph salesman! Yow, what detail, and what an evil looking machine! Gotta build one!

Movie cars too, from AMT. The "ZZR" from the flick "Out of Sight" and the Fireball 500, from the movie of the same name.

Dynamic has a Ferrari 330P3 1/24 scale kit for \$7.95. (Hey now, that's a sane price for a change!) It uses the powerful 26D Mad Hornet ball bearing motor in a sidewinder chassis. Body by Lancer. They sure get around don't they? Also, Dynamic's new General Electric motor can be found in a rolling chassis, sidewinder or inline, take your pick, for \$12.95. Motor alone is \$6.95, or with a frame, \$8.95. You should hear this bubba scream!

Lindberg's 1/24 slot racing line is blossoming. Now they've added a McLaren-Ford, a Hussein Dodge, and a marvelous Porsche Carrera "6" to the original Cobra coupe that they started with \$7.00 each.

In the tool line, I was impressed with K&S handy little pencil soldering iron, 30 Watts, which is ideal for model building, \$2.49. You can buy extra tips for 49 cents each. And their great tubing line is second to none. Buy 'em round, square, strips, angles, channel, it's endless. Reasonable in price too. Don't overlook their tube bending kit, for 98¢. It's been around awhile, and it's an

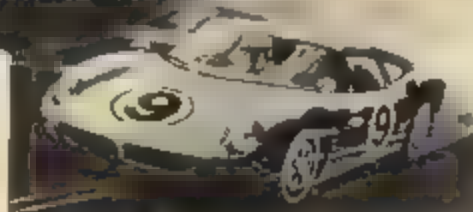
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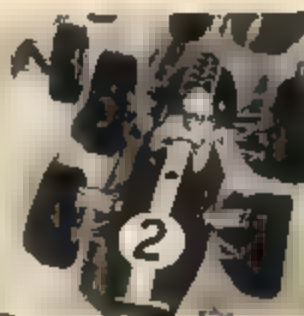
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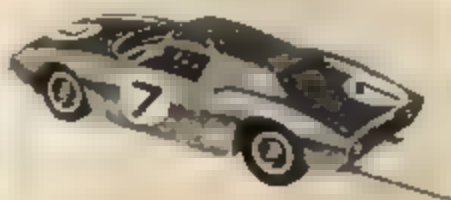
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tail or \$2.49 fogged.

AJ's latest grabbers are improved versions of their highly successful silicones, in many, many styles. And now a complete line of closed-cell spongies and wheels from these go-getting guys. \$1.29 a pair and quality galore. Their "Demon-Drive" friction drive sets were selling like hotcakes when I saw 'em last. Are gears really obsolete? Could be.

Monogram really laid it on heavy this year. A Lola T-70 in 1/32 scale. Drool. \$7.00, like the rest of their line. And in 1/24th, they're coming out with a doll of a 2-D Chappy, on their side-winder frame, complete with X-220S big Mabuchi! \$5.00. I said — \$5.00! Well now, there's a sane price for you!

Monogram statics — a 1/24 midget racer for \$1.50. Sure you can convert it to slot racing. But it looks great on the mantel piece too! But here's a model of a car that stopped me in my tracks! A '41 Lincoln Continental Cabriolet, in 1/24 scale. Mother, I feel faint. \$3.00 for this classic. Monogram detail throughout, which is the greatest compliment you can pay a car kit.

Without a lot of hoop-la, Rigen presented a 1/24 RTR Indy car that is straightaway the cleanest design I've seen in a long time. Motor pivots with the pickup arm. Sorry, I didn't catch the price, but it'll be reasonable from these guys. They're so dang honest and straightforward — that's why they build all of those tremendous wheels and tires for such a low price! Anyway, watch this car on the tracks around the good ol' U.S.A. It's gonna set things on fire!

Classic busted the show open with their frantic "Gamma Ray" RTR with disc brakes and CM 460 motor. \$13.98. A partner in this madness is their Serpent RTR, 1/24 with CM 450 motor, for \$12.98. Their updated competition Asp features the CM 460 too, for \$12.98.

This may not be an airplane mag, but Revell's huge 1/48 scale model of the Apollo Lunar spacecraft is too good to pass up. A full 20" high, this \$5.00 goodie sets you free man! Other statics, cars this time, include a wild and way out "Dodge Rebellion" Funny Car, in 1/25 scale for \$2.00. Also in that price range, a "Miss Deal" Funny Car that is a real

continued on page 57

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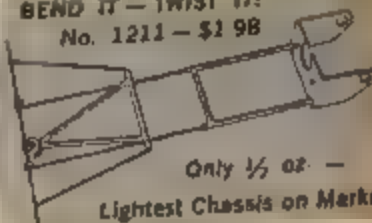


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"THE MAD MONKEE TUB"

"... Or how to go bananas with the Phantastic Phaeton!"

By Phil Willen and Chris Chan

Photos by Chris Chan

THERE USED TO BE AN EXPRESSION way back in the old days when I was a wee lad that said monkeys was the craziest people. Today, that probably makes a heap more sense than ever. Especially if you change monkeys to Monkees.

Anyone who has done time in front of the great Glass Eyeball knows that there are four fugitives from the snip shop named Peter, Mickey, Mike and little old Davey who are the latest sensations with the go go crowd. They also know that any self-respecting T.V. heroes have to have a very special type car that not only provides transportation for these super stars, but has their own personality built in as well.

Not wanting to be put down because their heroes lacked the proper set of wheels, the producers of the groovy foursomes' show set out for the castle of the supercar stylist, Dean Jeffries. Dean had built the Black Beauty for the Green Hornet and Kato to go cruising with, and among his other works is the famous and quite original Maria Ray. Here, they reasoned, was the man to whomp up a prestigious chariot befitting the royal quartet.

For starters, a 1966 Pontiac GTO convertible was acquired. Dean huddled in a corner with his loyal sidekick Dick Dean, then with their four eyes aglow the dynamic duo (oops wrong show) set upon the stock G.M. gem with a vengeance.

Because there are four heroes in the series, an ordinary size car simply wouldn't do. The Pontiac was streeeetched out and now there were not only custom made front and rear seats installed, but center seats as well. Matter of fact, the whole interior was yanked out and made up from scratch. Seats are cream tan vinyl, the floor is covered by wine-brown rugs, and Stewart Warner gauges fill up



Photos of the real thing by Ralph Poole

the dash. A special stereo tape machine belches forth Monkee music with scads of speakers screaming all around.

Outside the Monkeemobile all chrome was removed including door handles to smooth off the lines. Front and rear sheet metal was hand formed by Jeffries and Dean. For lighting, square CeBee headlights were brought over from France and taillights were fabricated specially for the car.

Once all the stock sheet metal was made ready, thirty (yes, I said 30) coats of candy-wine burgundy paint were laid on and lovingly hand rubbed. Hand made two-piece windshields and side glass were installed and all the goodies were tacked in place, including a stock G.T.O. grill.

The simeon super sled rests on four special Cragar wheels around which are wrapped special Goodyear tires, 900 x 15 in the rear, and 650 x 15 up front.

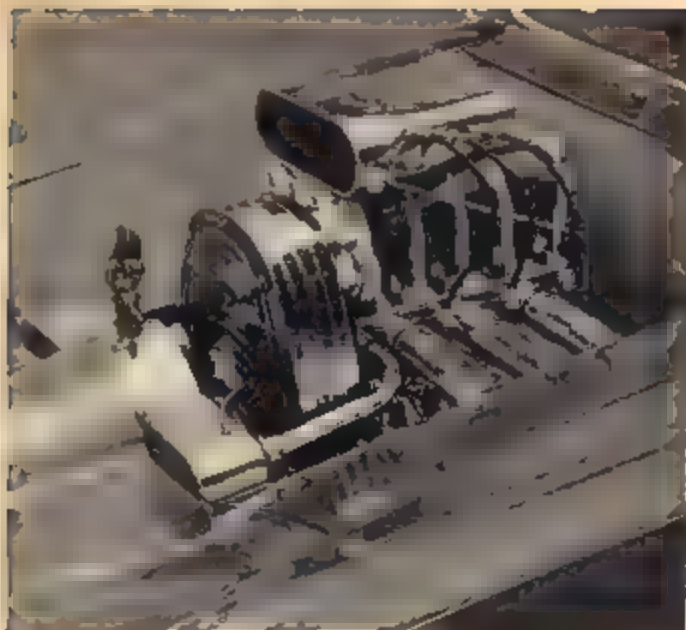
An undertaking of this size requires much in the way of motive power. At first, it was planned to use ten thousand mabucks. This plan was deep-sixed because of problems with a long enough extension cord, and a good old 380 cubic inch Pontiac was worked over to provide plenty of push. Lots of goodies were

stuffed in the engine and a wicked looking blower was set on top.

Having watched the wild looking prototype take shape in the Jeffries operating room, I was quite impressed when Dean led me into a dark corner of the shop and showed me what M.P.C. had sent him. There sat the Monkee machine in miniature. An advance copy of a model slated for kit form in the future. It was a great replica right down to the special hand-made top, and tiny wicked looking blower sitting on top of the hood.

The masterful modelers at M.P.C. have done a real nifty job of shrinking to scale the unique set of wheels that travels the tube weekly, and all you Monkee fans should set aside your bananas and pick up on these kits as soon as your local hobby hangout has 'em.

I've given you a bite size glimpse of the care and workmanship that has gone into the real thing. Try to use the same care on the kit and you'll wind up with an out of sight copy of the mighty mammoth Monkee machine to sit upon your boob box while you watch the frantic foursome zap around in the real one.



The hood of the oversized GTO is removed by carefully scribing the edges with a sharp X-Acto knife.



With the hood now separated from the main body shell, you are free to work without any obstructions.



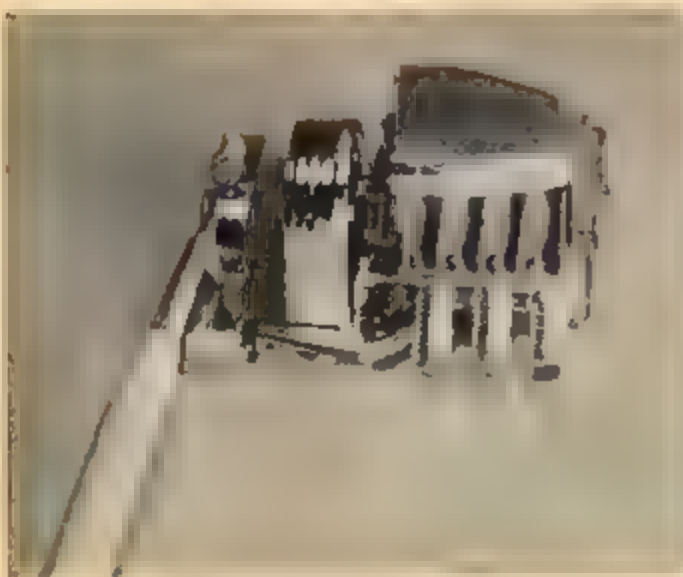
Holes for the blower tubes are drilled out first with a $\frac{1}{8}$ " bit in a pin rise.



To clear the tubes for an opening hood the bottoms of the holes must be opened with a rat tail file.



Tape the hood back into body for painting. If it were to be painted individually it would probably not match.



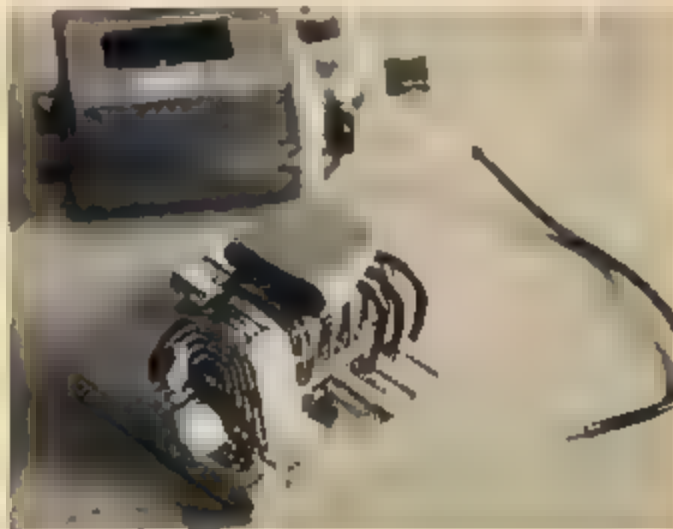
Begin engine detailing by painting the winged wheel ornament Pactra gold leaf.



Indentations in the blower assembly are brushed up in flat red with a #000 sable hair.



Bore out three 1/16" holes in the side of the air scoop for your ram tubes.



I chopped off some short pieces of motor lead wire for the tubes themselves, and secured them with contact cement.



A neat way to install a throttle linkage is to use rewinding wire bent to fit and cemented in place.



A base coat of gold AMT lacquer is dusted on. The real color of the Monkeemobile is GTO red, but we wanted something a little more exciting.



Several coats of AMT's ruby red put on the final touch. Don't forget the Monkeemobile painting contest.



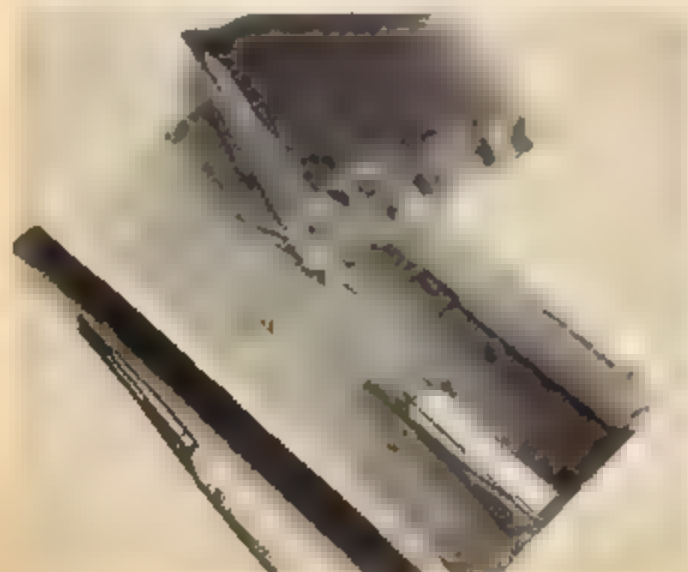
Assemble the convertible top and spray it flat white to simulate soft cloth



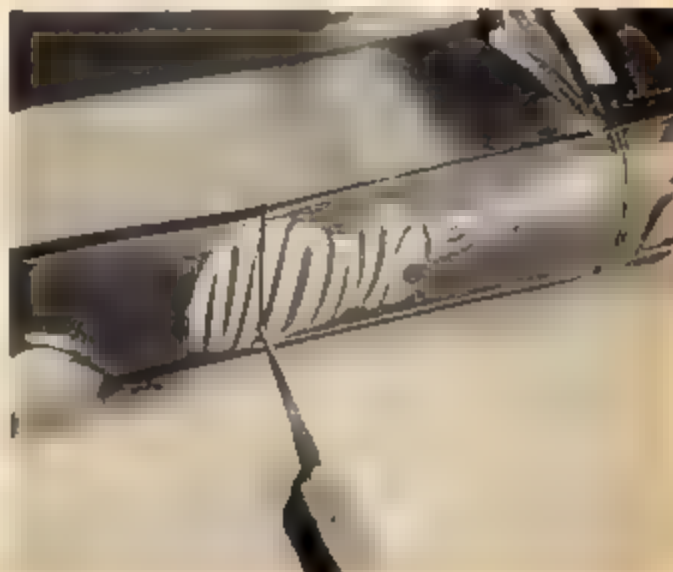
Speed equipment decals are mostly slot racing types scavanged up from a half dozen different sheets.



Paint the parachute pack a flat yellow tone with flat brown trim.



Funny fur flocking in fire engine red was used to make a carpet-like floor for the interior.



After the "Monkee" decal is thoroughly dried the seams are split with an X-Acto.



Fully assembled on its long frame the Monkeemobile has a weird identity all its own.



The realistic engine detail work really shows up when installed in the completed car.



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SLOT CAR MOTOR REWINDERS HAVE COME A LONG WAY from the classical methods of simply altering the size and amount of wire. Now, as virtually everyone quick is running a rewind, newer and faster variations are popping up. If your hot rewind just got stomped, maybe double-winding is the answer to beef up your power arsenal. Double-winding can give you that much needed edge of extra RPM's and torque.

It's commonly known that the larger the size wire used, the lower the resistance of a rewind. If you have trouble convincing yourself of this, try cramming BB's into a straw, and then try shoving them into a hose. Thus common sense tells you that the larger wire will let the electricity in faster too (although common sense like this doesn't always work out this well). With the same amount of wire (the actual copper) and the lower resistance, the net result is a rewind that rolls a lot faster. Okay, one way to do this is to use larger wire. This is usually effective, but in terms of perfection you're way off. Double-winding gives you two coils on each pole to work with and it's as simple as normal rewinding.

Getting back to area of decreased resistance the principle of double winding is easy to understand. With two wires instead of one to carry the load, the re-

The latest and hottest idea in Pro rewinding.

sistance will naturally be lower. The net effect of using two wires of the same size is a current-carrying-wire of three sizes larger. For an example, if you were to use two lengths of #32 wire, both 7 feet long, and wrapped them into the armature, the resistance would be the exact equivalent to that of 7 feet of #29.

If this were the only facet of double-winding then there wouldn't be much sense in the process; but the real advantage is in using wires of different sizes. Now if you've done any experimenting with rewinds you've probably found that too much wire gives good braking and acceleration, but no top end; while too little has RPM to burn (and usually does just that) but barely enough guts to start itself. So why not put both of them on the same pole. The way to get the best out of each is to use two different gauges of wire.

Rewind the first size on as normal, but with less than the normal amount of wire. Then on the same pole, wind the next size wire on too. It's usually neater to wind the larger wire on first, but it's hardly any difference at all otherwise.

Although it's not recommended to suggest anything to try (people blame you for burnouts, etc.), here are hints and winds I've found useful. First, use the

24 / model car science

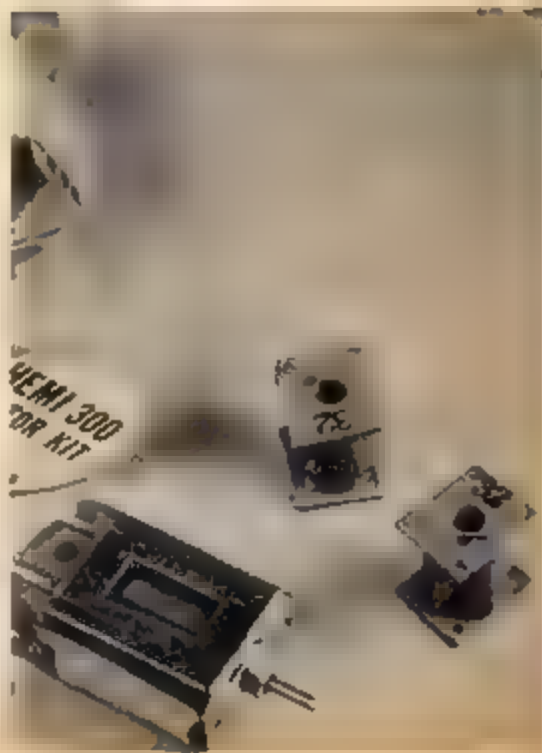


DOUBLE WINDING . . . DOUBLE WINDING . . .

same length for each size of wire. There isn't really anything clear cut that explains why this should work any better, but I have always felt that a little trial and error is more important than a lot of formulas. The same response goes for measuring by "feet" instead of by "turns" of wire (I have faster motors using "feet," but my teammate has always had better results with "turns"). For example, on high-amp commercial tracks with the American-type power supply, 6 feet of both #30 and #32 is both powerful and reliable. However, if you are good in the timing department and use high strength magnets like Champions's Arco 33's, #29 and #33 in 5-3/4 foot lengths is a real bomb. But, best yet, get out your wire and experiment around; you could have the meanest motor going.

By Chris Chan

The easy way to start double winding is with the Hemi motor kit and two spools of rewinding wire.





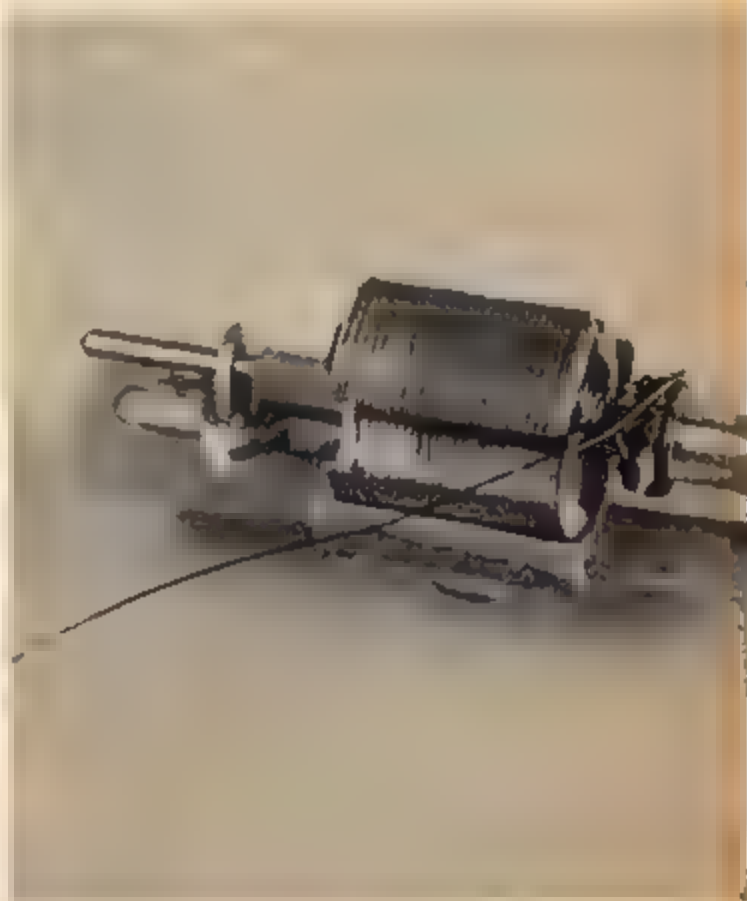
Using 500 grit sandpaper carefully remove all insulation from the wire.



Wrap the comm with pickup braid and hold it in place with an alligator clip for a heat sink before soldering.



Rewind now about 7 feet of the #32 wire on your tool if you have one, or by hand if you haven't.



Take 7 more feet of the #32 wire and wind the armature again. Repeat the process for each pole.

Melt your old gears down fellas, friction drive is taking over!

ARE GEARS OUT?

By D. C. Cain

Could be I guess! Judging from what I've just seen, gears just might be going the way of the buggy-whip and button down shoes! AJ's, those midwest silicone guys, have released a little gizz called a "Demon-Drive" wheel that completely eliminates the gears! Now this isn't really revolutionary. Hey told you about friction drive way back when in our sister mag, MC&T, but these little goodies are revolutionary in a way, because they can be used on nearly any side-winder in existence. Simply pop the old pinion and spur gears off and throw them in the used parts box. Slip one of the Demon-Drive wheels in place on the motor shaft and fasten it down with the set screw, and re-install the rear road wheel. Presto! You've got friction drive!

Would you believe that you get not one, but three Demon-Drive wheels for just \$1.29? These three drive wheels let you choose a variety of ratios, used with various diameter rear road wheels.

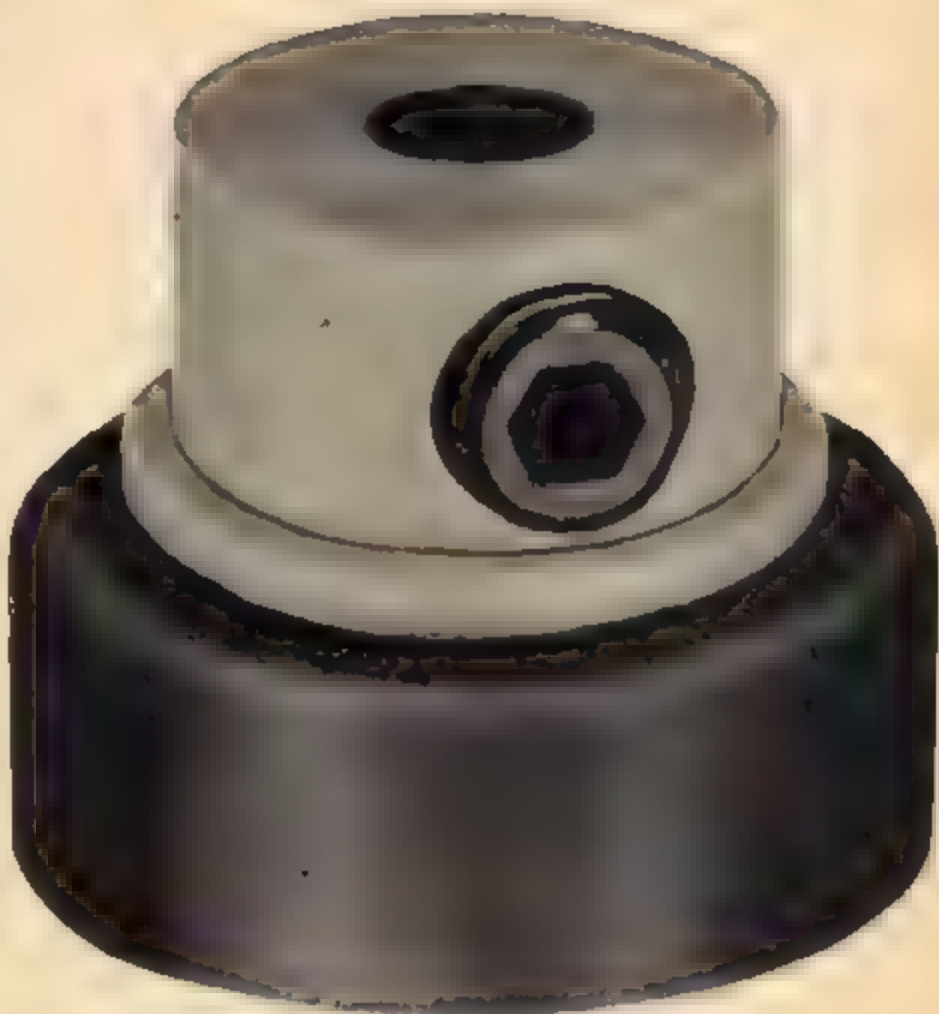
What are the advantages that friction drive has to offer? Quiet running, reduced cost, variable ratios, no wear (look at the enduro boys perk up their ears!) fewer motor burn-outs from incorrectly adjusted gears, and increased efficiency.

The Demon Drive wheels fit any motor shaft of .093" diameter. Included in the \$1.29 price tag is three drive wheels, 5/16", 11/32", and 3/8" in diameter. Run these silicone drive wheels against AJ's (or any other firm's for that matter) great silicone tires, and you've got traction plus! They also work great running against regular sponge tires.

And hear this! If you don't want to buy all three, these drive wheels are available for just 49¢ each!

AJ's also released a closed cell sponge tire that is bonded, trued, and ready to run, for just \$1.29 a pair. Available in gray or black in all sizes, from 1/2" x 1" to 1/2" x 1 1/4", and 3/8" x 1" to 3/8" x 1 1/8". They're mounted on aluminum hubs, threaded 5-40. Traction is tremendous, and these tires work great with the Demon Drives too.

Perhaps the gear as we know it isn't ready for the scrap heap quite yet, but this new friction drive approach by AJ's will surely get the ball rolling!



And this is the little gizz that just might do it! AJ's Demon-Drive wheel!

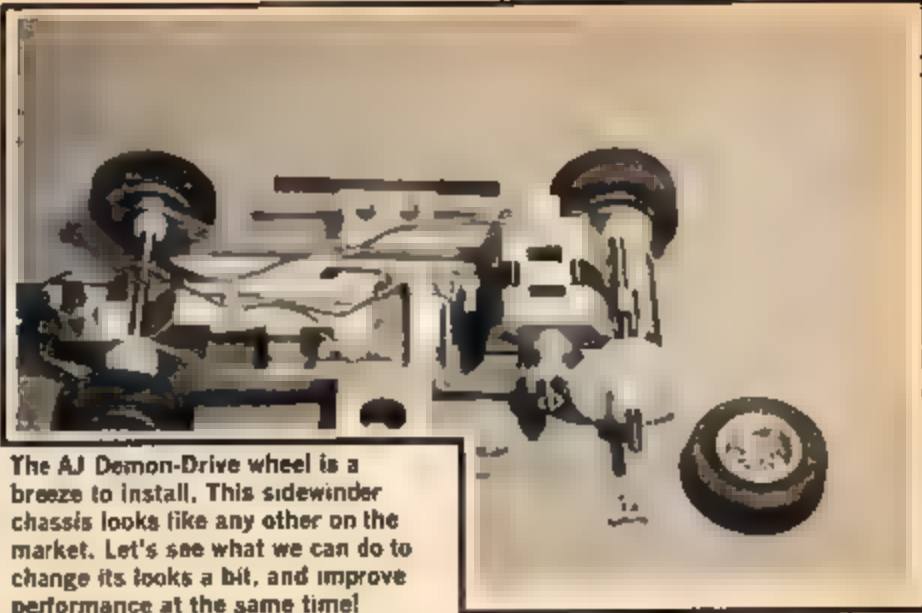
DEMON-DRIVE GEAR RATIO CHART

O.D. of Demon-Drive wheel		O.D. of rear tire		
		7/8"	1"	1-1/8"
TKDD1	5/16"	2.77:1	3.2:1	3.6:1
TKDD2	11/32"	3:1	3.44:1	3.87:1
TKDD3	3/8"	2.33:1	2.66:1	3:1

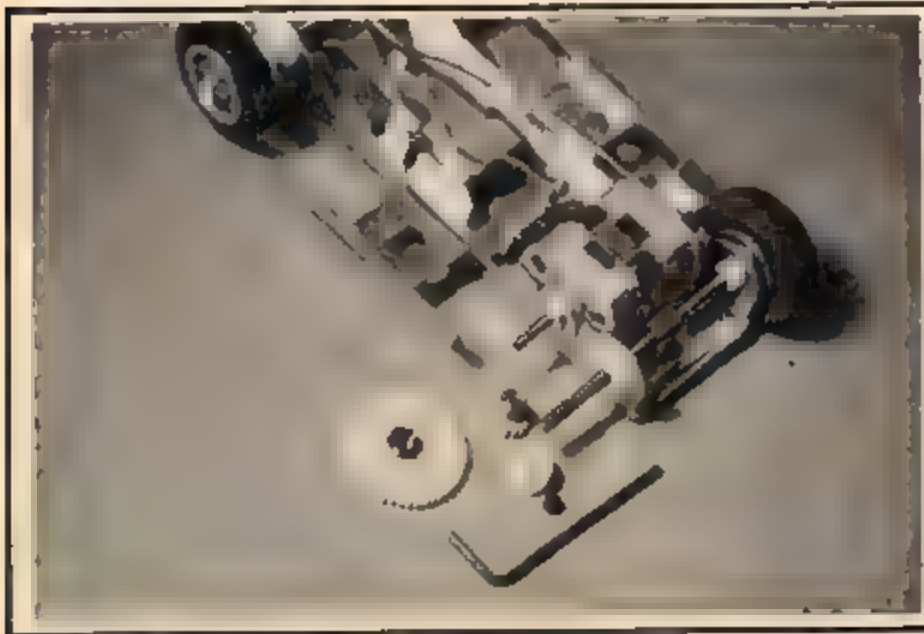
NOTE: Ratios can be changed further by sanding down the diameter of the drive wheel.



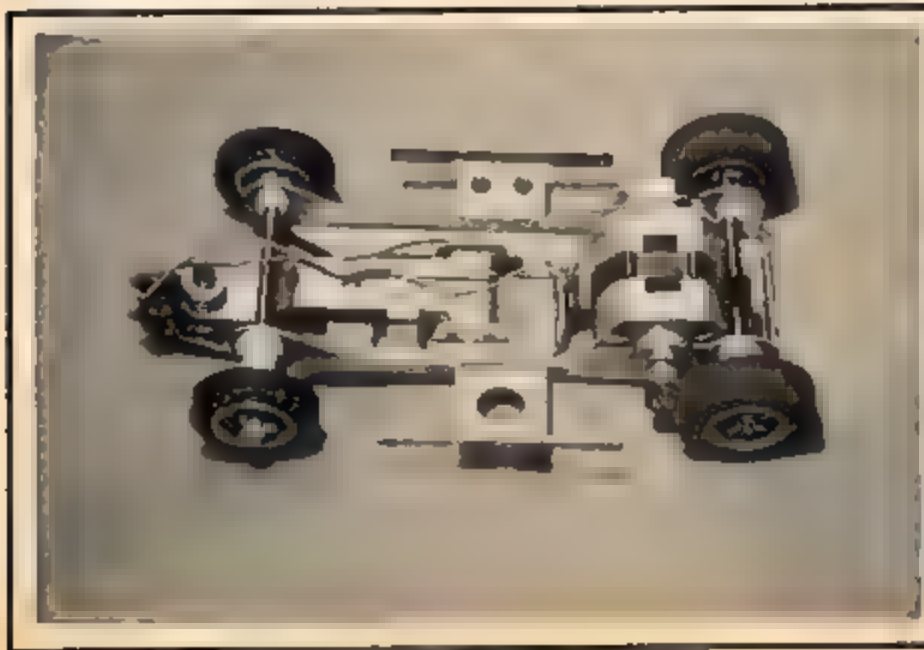
Small but mighty, they're available in sets of three, or separately for 49¢ each.



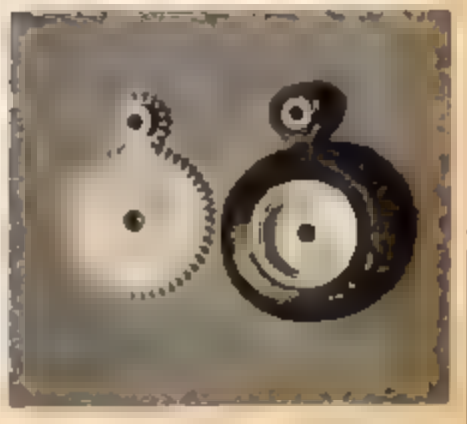
The AJ Demon-Drive wheel is a breeze to install. This sidewinder chassis looks like any other on the market. Let's see what we can do to change its looks a bit, and improve performance at the same time!



Remove the gears and spacers and set them aside. Slip the Demon-Drive wheel on the motor shaft and lock it in place with a set screw. You can now thread the wheel back on, but use the right spacers to bring the tire perfectly in line with the Demon-Drive pinion wheel.



The Demon-Drive runs quietly and super-efficiently against any kind of tire, sponge or silicone. A really good combo is the Demon-Drive against one of AJ's latest silicone tires. Could this be the beginning of the end for gears?



CUT RATE LIGHT KIT THINGIE

K&S turns on the nighttime scene with budget beams

NOW IS THE TIME FOR ALL YOU ENDURO FANATICS to grab hold of some real illumination for your scale LeMans hauler. With the K&S light kit you can set up some glow all over your car in just minutes, and still have enough cash to foot the entry fee come race time.

K&S, that's right, the "tubing people," have come out with just the thing to take all the work out of scale lighting. Just 98

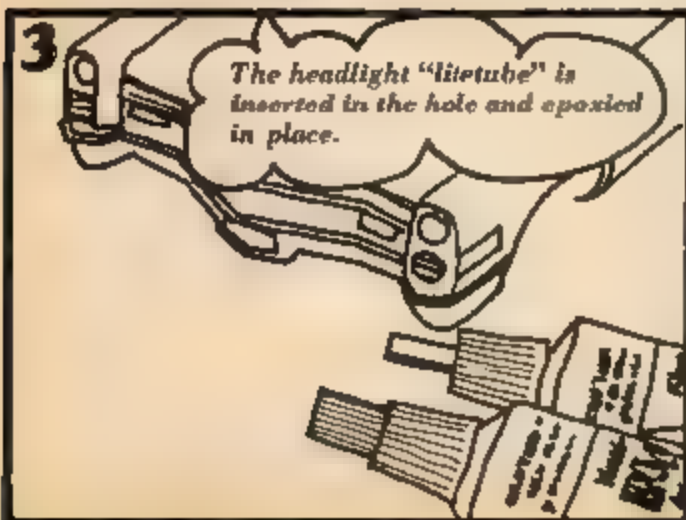
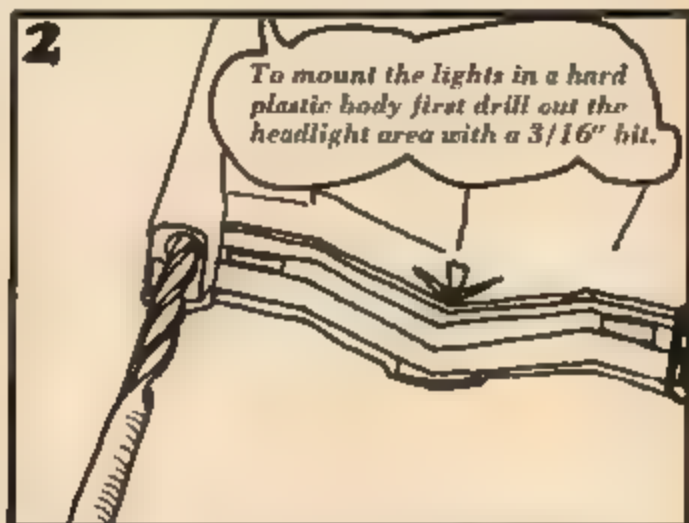
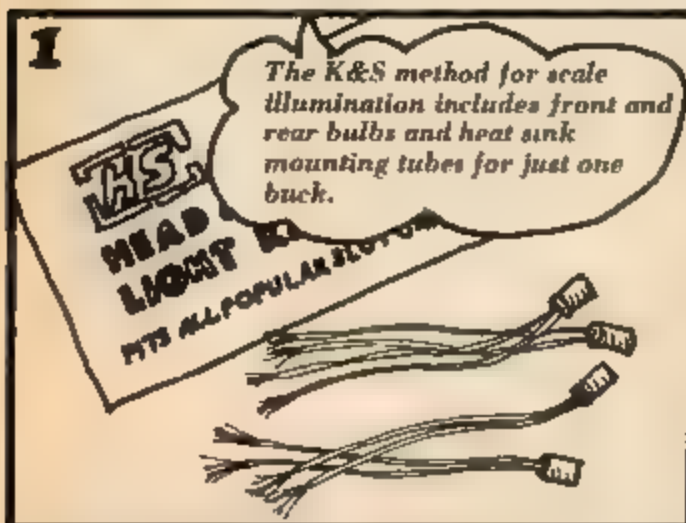
cents will get you their terrific head-and-tail light kit, complete with a pair each of red and clear bulbs neatly socketed in easy-to-work-with brass tubes. The lights are easily adapted to any hard plastic slot car in either 1/24 or 1/32 scale. Just drill 3/16" holes where you want your candle power, pop in the headlight tube with the bulb protruding 1/4", and epoxy it in place. For the clear body, which is

undoubtedly the most popular, the "lite tubes" are first positioned the proper distance apart to show through the car's headlight openings, then attached first to each other and then to the frame by means of piano wire bent and soldered to fit.

The lights in the kit are manufactured to operate on 12 volts with very little amperage. However, as they do heat up a bit, I've used up to 6 bulbs to prevent overheating. This, in a Ford "J" car, is wired up in series pattern. Unfortunately if just one bulb overloads and blows, all six lights will go out.

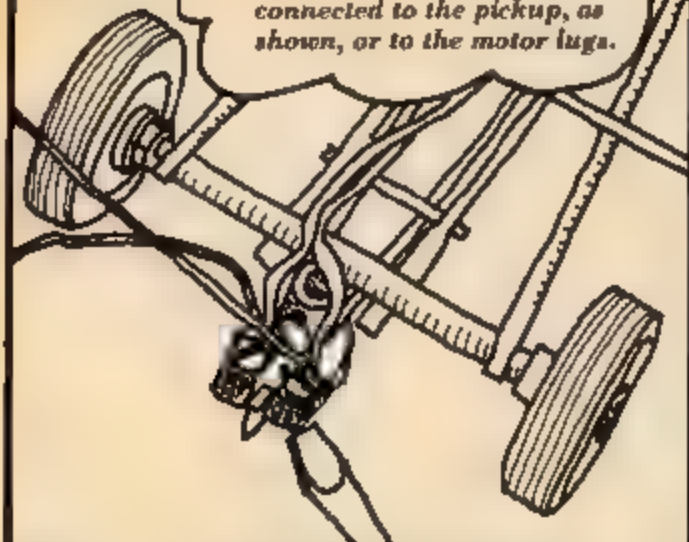
To hook up your lights in series, start with the first bulb and hook one of the leads up to one lead of the next in line until you have just two loose leads, from the first and last bulbs of the series. These are the two that are attached to the motor lugs. In the parallel method, each bulb is individually hooked up to the motor lugs and runs independently of the others. In either case, with all of the lights shining brightly, the car will show no signs of slowing down because of power drain.

Grab your flashlight, Night Fighter, and head for the hobby shop for K&S's scale realism in a nice neat package.



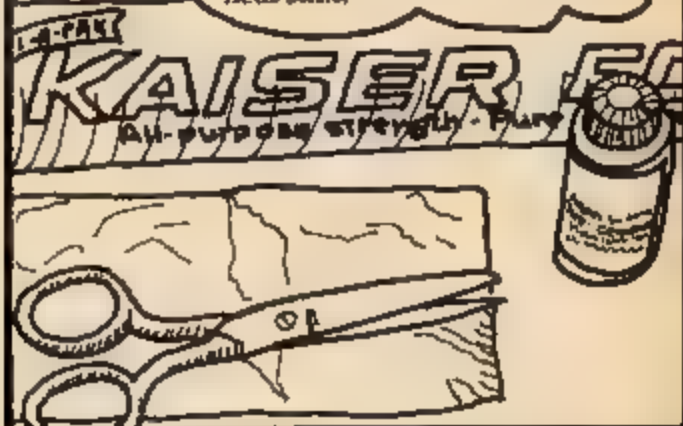
5

The remaining two wires are connected to the pickup, as shown, or to the motor lugs.



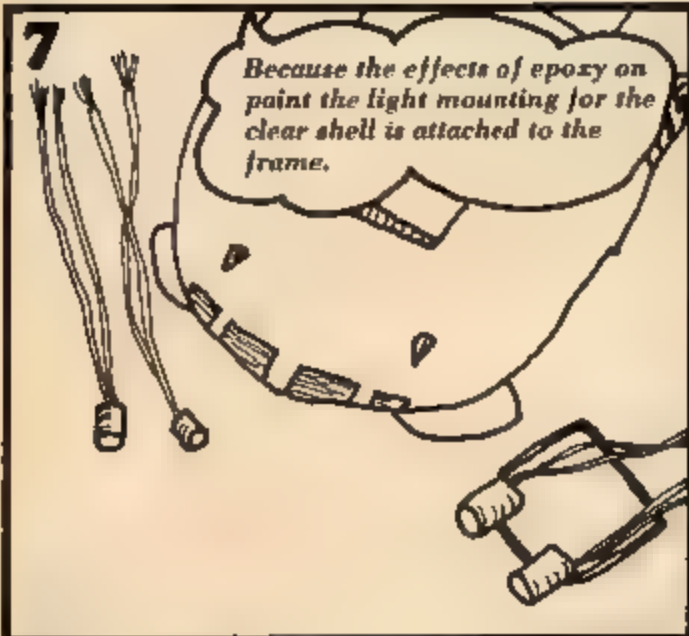
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To keep the light from shining through everywhere, aluminum foil keeps the light on the track alone and doubles as a valuable heat sink.



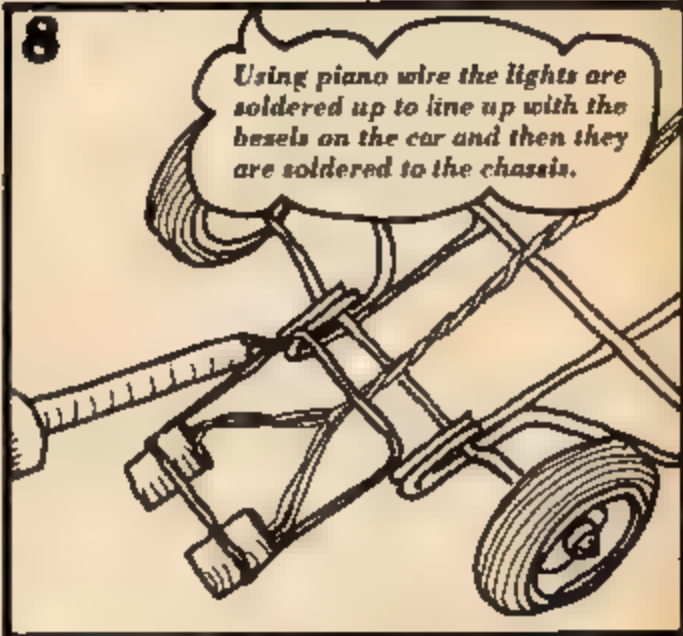
7

Because the effects of epoxy on paint the light mounting for the clear shell is attached to the frame.



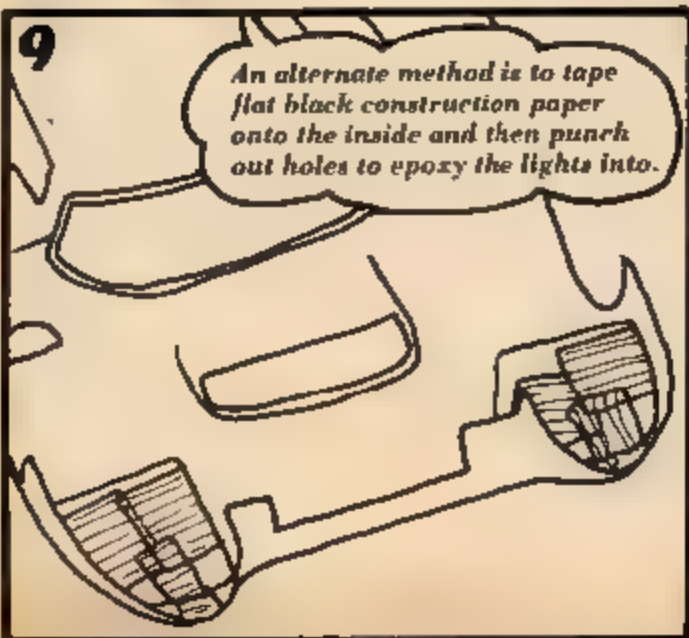
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Using piano wire the lights are soldered up to line up with the bezels on the car and then they are soldered to the chassis.



9

An alternate method is to tape flat black construction paper onto the inside and then punch out holes to epoxy the lights into.

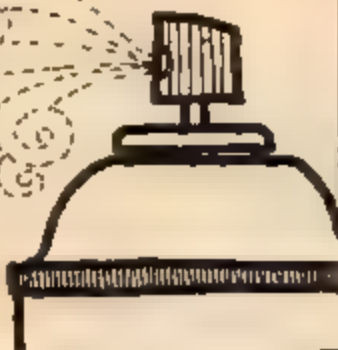


10

From the outside the taped in lights give off a very realistic appearance.



don emmons' **DETAIL FOR REAL**



This group of tires were all white plastic to start with. It is very simple to paint them flat black and, when dry, file off the paint from the tops of each letter

WHEELS AND TIRES: Good looks from the asphalt up.

Wheels are often overlooked by the average model builder. With the large variety of wheels available in kits now, and some kits offering an extra set or two, the model can be changed around easily and at no additional expense. Most of these wheels look good just as they are in plain chrome finish, but can change the entire appearance of your model when a little extra time is spent on detailing them.

I know that some are to be left chrome to look like the real ones, but the trend now is to paint the spokes or low areas. In most cases, a dark aluminum color or flat black is used. However, this is not the only color that looks good. You can use different colors to match the paint job on your model. Some real car wheels are showing up with the same Candy color painted on the spokes as the car and it looks sharp. I feel that on wheels such as the mags, the chromed units look too plain and it is difficult to tell which exact wheel they are. The simple matter of brushing on some paint will change all that in a few seconds and

you'll have a more realistic looking set of wheels. A wide variety of colors have been used on the Cragar wheels in this article and it depends on the color of the car that they are to be used on. You can use any Candy color over the chrome with very good results. One thing to remember is that aluminum and flat black will blend with any color of car and looks great. A mixture of Flat Aluminum and Flat Black paint gives a perfect match to the cast finish like most real wheels. When painting them, take plenty of time and work neatly making sure to leave the lug nuts and outer areas chromed.

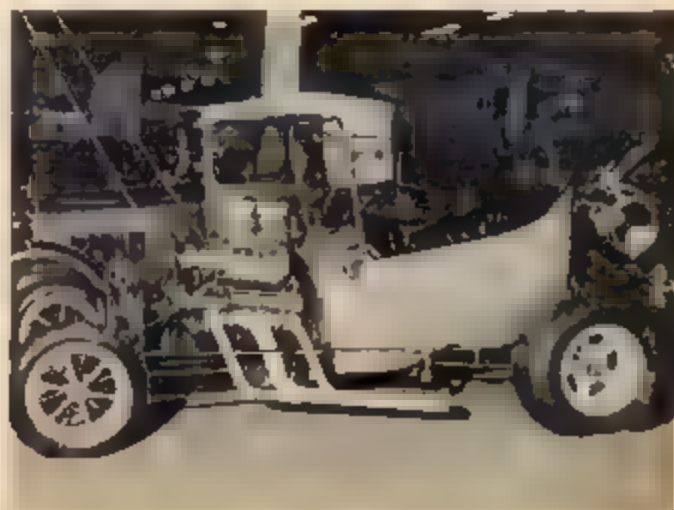
Another main point: do not overlook the tires on your model. The model manufacturers are now going to great lengths to give you the most real looking tires they can for the money. The tires are a good portion of the expense of the kit. I suggest taking advantage of the variety offered and doing some swapping whenever possible to get the right type of wheel and tire for a particular model. For example, the wide

tread types should be used on models of stock car racers (NASCAR) and small tires used on the front of Funny Cars. Why not keep the extra tires you don't use from the kits and then select the best setup for your upcoming projects.

Look over the photos of the finished models in the article to get some ideas on finishing your model. A good example here is the "T" roadster with a number of different wheel and tire setups that are being used on real rods now. I.M.C. has a very good set in their Indy Racer kit, and M.P.C.'s Mako Shark and Wilhelm's Wonder kits will supply you with these new wide race car tires for street or track machines. Personally I think the white plastic tires that AMT has been using are great, and more realistic looking side walls can be obtained when they are painted flat black and the paint filed off the tops of the lettering. If you have not yet tried this technique, do so; you'll surprise yourself with this perfect lettering. For the drag racer, look at the wild set of wrinkle slicks in the Camaro kit.



A set of white tires were used here with chromed wires from the AMT Silhouette kit. The Goodyear slicks with a wrinkle effect are new for the drag racers.



This real rod runs a set of all polished wheels. They look good here mainly because they fit into the general look of the rod.



Lettering can be painted on the side walls if you are very careful. Gold paint is being used here. Brush should be wiped off so very little paint is left on tip.



Although photo does not show the color these two are painted with Candy colors. The chrome base works well for candy finishes.



The Corvette is Candy Red and the spokes are painted with the same paint. Spray some into can top and brush it on spokes.



These are the unaltered wheels for the Camaro kit. They are duplicates of Appliances "Apache" wheel. They must be painted to look at all like the real thing.



All the small finned areas on the Apache wheel should be painted with a darkened flat aluminum or flat black. This leaves only the flat area of spokes chromed.



Now this is more like it. What a difference a little paint makes in one set of wheels on the same car.

don emmons DETAIL FOR REAL



When painting the spokes, leave wheels on plastic tree or place in a tire. This helps preserve the chrome finish.



Wheels take on entirely new appearance by simply painting different colors on the spokes.



Camara drag racer looks good with either set of colored wheels. The lighter set has flat aluminum painted on them.

Photos by Don Emmons



The effectiveness of painting the spokes is noticeable in this photo. Lower wheel is a plain chromed unit while the others have been altered.



Yellow paint was used on the rear wheel of this car to match body color. Front unit shows contrast between painted and chromed one.



Here we have a combination of Mag wheels with spokes painted flat aluminum and all chrome cycle wheels on the front.



This is a good example of same set up on a real rod. Monogram's Uncertain T front wheels are perfect for a rod like this.



Shown is a good example of the differing appearance one rod can have with detailed wheels. Cragar wheels look entirely different when spokes are painted flat black.

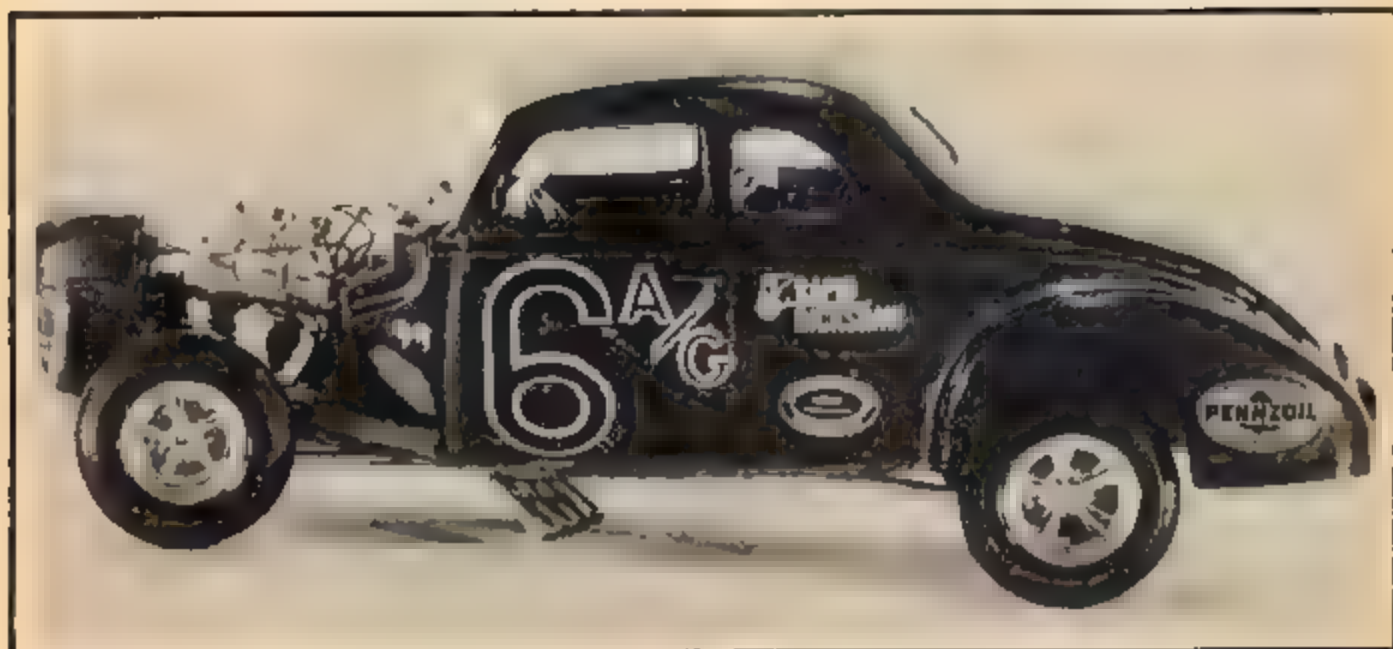


Take a close look at what I have been saying about painting the spokes.

MCS: MODEL OF THE MONTH CONTEST

FIRST
PRIZE
MODEL CAR SCIENCE
171 BARRINGTON PL.
LOS ANGELES,
CALIF. 90049

THE TOP COMPETITION MACHINE ... and taker of this month's \$25 Savings Bond came from Jim Spitzer, P.O. Box 183, New Market, Va. His '40 Ford asphaltter sports an Ala Karl front end, a wired Chevy 327 mill, and a combination MPC Dodge Charger-AMT Chevy interior. Finish is strawberry over gold (!)!



This "Full House Fiat" from George Miller of New Market, Va. features cut-n-hinged doors, scratched roll bar, custom drag frame, and a detailed Dodge 273 with Hemi heads

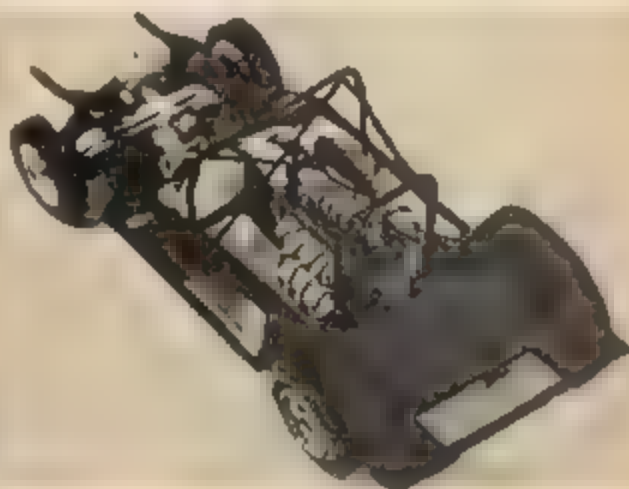


From Mike Henning, of Miller, S.D., came this clean-n-sharp MPC '66 Vette, done up as an asphaltter, with a Chevy 327 fuel injected mill for go. Front suspension is from AMT's '66 Falcon; rear end is a Revell '41 Willys Headers were scratched from K&S brass tubing



The detailer's delight . . . Revell's great Anglia! This version from Marc Kuster, of New Berlin, Wisc.; the injected Olds mill has been wired, and fuel line and accelerator linkage added. Rear wheel wells have been radiused for bigger skins.

The "Hustler" is yet another strictly comp machine, this time from Jim Landers, of Fairfax, Va. Body is basically Revell '57 Chevy, with a scratch-built fastback added. Power is a blown Chrysler from AMT's '32 Ford. Chassis has been trimmed down, while a scratched roll cage, dash, trans, and front suspension have been added.



It's an old face, with new power. This '50 Ford (AMT) from Wallace Jackson, San Pablo, Calif., sports an altered wheelbase, bobbed chassis, complete roll cage, and a Ford 527 mill, with scratched headers and velocity stacks.





"LITTLE PEOPLE"

By Chris Chan If you've set out to detail any home track you probably don't want abandoned pits or deserted grandstands. Gobs of miniature people, properly painted up, are essential to every well detailed layout.

Monogram has just released what are undoubtedly the finest sets of 1/32 scale figures you can buy, but they come ghost white. Make sure to pick up some good quality sable brushes in sizes from 2 to 000 for super detailing and paints clearly labeled as having a flat finish. Flatt, Ulrich, and Pactra have large selection of these matte finish paints, and they are a must. There is nothing more unrealistic than figures painted with

glossy paint. If you can't obtain enough of the colors in flat tones, then the only alternative would be to paint the figures with the glossy paint and then spray on Testors Dul'Coat.

Before you begin painting, it's a good idea to first trim each of the figures with an X-acto knife to remove all of the molding flash. To make things easier I use one color at a time on each figure through the whole batch; rather than paint each one entirely by itself. For eyebrows and eyes wait for the flesh paint to dry thoroughly; then take the 000 brush and lightly trace the area with as little paint as possible. Too much paint in this area can really make a mess out of an otherwise good job.

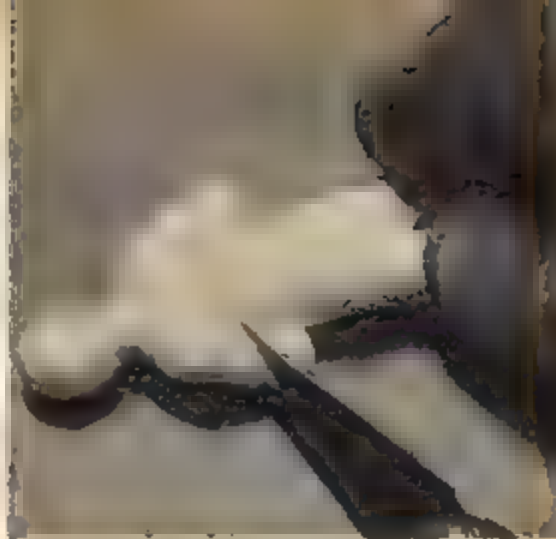
The biggest problem in painting a large number of people is in choosing colors. Besides being limited by the amount of colors available, it is hard to be realistic without being repetitious.

There are a few ways of getting around this: use dull or drab colors; repetition of bright colors stands out, but several shirts or pants in the same dull color often go unnoticed. Mix the colors you have; the different shades you get can bolster your paint supply. Get adventurous and paint designs on the clothes one of my female spectators has a paisley dress. Placement is important in maintaining realism too. Before cutting off the bases and permanently fastening them down try moving them around to get "life" into their poses. Static model cars are excellent props for spectators and are cheap compared to the added realism.

If you're lonely after all of your friends give you up as a total loss because of your strange obsessions to race day and night, your newly painted Monogram almost-real people can keep you company, and they'll never leave you. Hmmm?)



Start off by buying flat finish paints. They'll give you the most realistic figures possible.



With a sharp X-Acto knife carefully trim off any excess "flash" the figures may have on them because of the mold



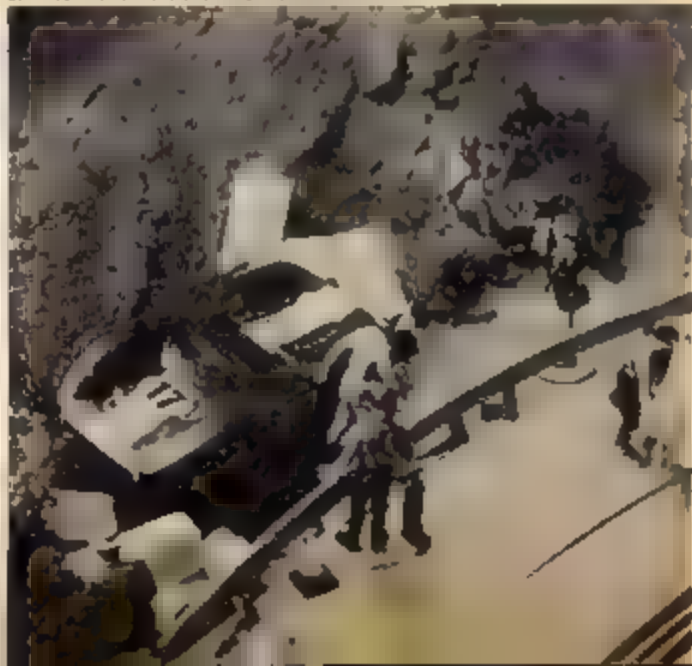
Using one color at a time go through the whole batch, shifting them from one pile to another. This will save you extra brush cleaning.

Sprinkle spectators liberally all over the track. All the cars in the photos just run for a half a buck each, and are great for props.



Keep eyes and eyebrows from being too conspicuous by giving just a highlight of the proper color with a #000 brush.

The easiest scene to make up is a crash situation. An empty slot car shell that is due for the trash can makes an excellent "victim."



Custom make your own "Super Foamies" for the latest trend in wee-scale traction.

TRACK GRABBERS... HO STYLE!

By Bob Schleicher

One of the fascinating things about HO, the smallest of the model racing sizes, is the ease with which modifications and hop-up ideas can be applied to the cars. The fact that this is the smallest scale makes it possible, in many cases, to adapt the larger parts, from 1/32, or 1/24 scale to HO.

You, as an HO racing enthusiast, owe it to your fellow HO'ers to keep your eyes open for new ideas in model racing, regardless of the scale, for adaptation to your favorite size. Those of you who sit back and wonder at all of the super-hop-up ideas available to the larger scales should take a good, long look at the tires in these photos.

The latest and best in traction are the "closed cell" tires such as the Cox #3869. The majority of the blue, red, green, as well as the grey, colored tires that you see at the commercial raceways, are this same closed cell foam rubber. (Some brands, incidentally, are colored the traditional black!)

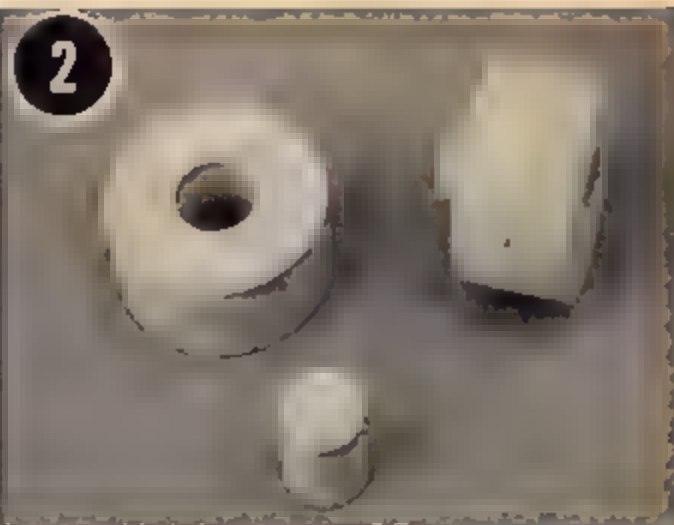
You can have these same, super-traction, closed cell, foam tires for your HO cars with a minimum amount of work and little cost. If you can catch someone who is buying a set of tires, or maybe make a deal with one of your friends who races 1/24 cars on commercial tracks, you just may be able to obtain the centers from a pair of Cox grey foam tires for free. The larger scale racers will only want the tires. The scrap from the center of the tire is useless for a 1/24 scale car, and chances are most modelers will throw it away. Which is great, 'cause the center is the only part you HO fans will want. But even if you have to buy a set of the 1/24 scale tires, the 49 cent price tag isn't going to dent any racing budget much.

The only really tricky part of cutting down the centers from a set of 1/24 scale tires to fit HO, is that all the cuts and the center hole you punch must be very precise. The foam rubber flexes as you cut it, so a little practice with one tire may be necessary before the sides of the tires are absolutely parallel, so the tire won't wobble. And the center hole must be at exact right angles to the tire.





HO Hop-up items can, and do, come from the most unlikely places - these 1/24 scale Cox "gray" tires are an example.



In the center of the Cox #3869 tires is a piece of "scrap" rubber that most racers will throw away. Save them for some deserving HO buff.



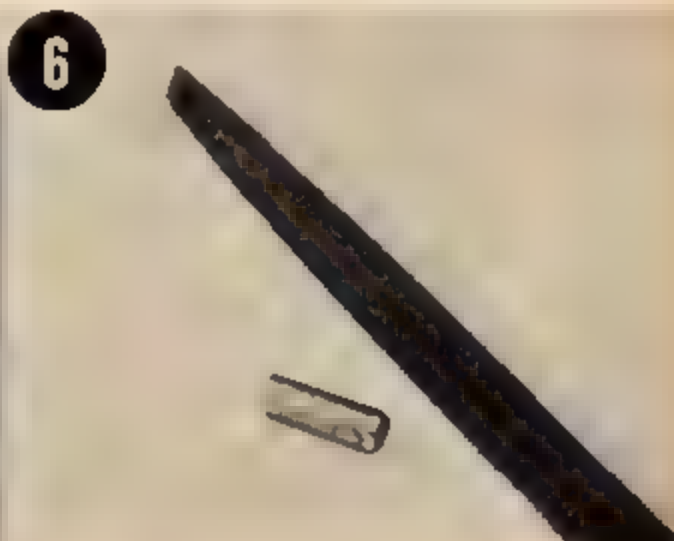
The "scrap" from the center of the Cox tires is the part the HO fan will need. Split one of the "centers" with an Exacto knife.



Cut one of the halves you just created into half again. If you make each cut carefully, one pair of 1/24 tires can net 4 pair in HO.



Cut off about 1/2 inch of 1/8 inch brass tubing with a razor saw. Cut at an exact right angle to the tubing.



Sharpen the edge of one end of the tubing by filing it off a slight angle. Keep the cut as even as you can.



Drive the sharpened tubing through one of the cut pieces of tire. The tubing **MUST** be in the exact center of the tire.

8



The sharpened tubing has served as a "punch" to cut out the center of H0 size tire. The process is similar to the way the tires were cut at the factory.

9



Remove the body from your car, and pry off the rear tires and wheels with a screwdriver. Remove the rear axle also.

10

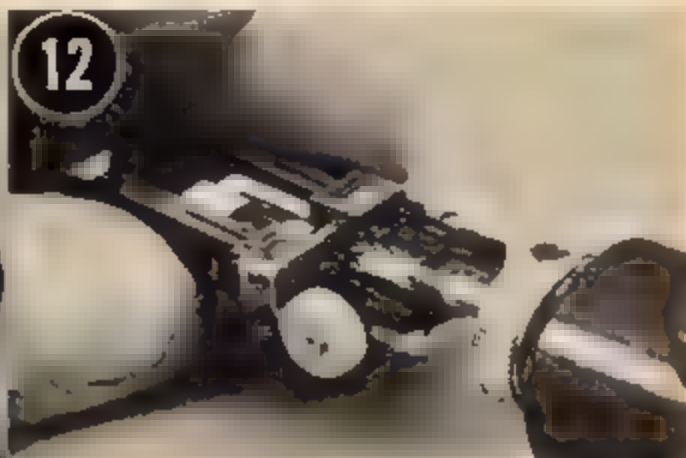


Coat one of the wheels with a thin layer of Goodyear Pliobond cement. Quickly slip one of the new tires on the wheel.



Using a power-tool and fine sandpaper, trim the tire to about the same size as the original. Pull the wheel from the axle, put the other one on and sand it.

12



If you have made the new tires smaller than the originals, to lower the car's center of gravity, some of the plastic from the bottom of the chassis may need to be removed to provide sufficient ground clearance.

HOW TO STRE-E-TCH

THAT TRACK

Expand your race set for as little as 30¢ per foot!

By Bob Schleicher

Most of you have received a model car racing set, as a Christmas gift, this year or last. Few of these sets on the market are large enough to satisfy the desire for long straights and high speeds that lend so much excitement to model car racing. Who hasn't longed for the super-straights that the big commercial raceways have? The big problem here, as always is M.O.N.E.Y. The 40 or 50 feet of extra straight track, for the 1/32 or 1/24 scale sets, will cost between \$30.00 and \$60.00 depending on the brand and quantity you buy. However, if you follow the simple steps outlined here, you can add all that extra special distance to your two lane race track, for less than \$12.00!

The bill of materials lists all of the parts and pieces you'll need. The only tools required are a small hand or electric drill with a 1/16" drill bit, a ruler, a hammer, a razor saw (all hobby shops can furnish this — it's great for cutting any plastic), a paint brush, a pair of diagonal wire cutters (heavy scissors would do), knife, and a good hand saw. The sawing is the only real hard work involved. If you know somebody with an electric power saw, it would be well worth your effort to have him cut the plywood track surface strips for you. The plywood used is only 1/8" thick, but you need to make a lot of long, straight, cuts. If you cut it yourself, with a handsaw, take a day or so, and cut slowly and carefully.

The pictures and captions explain the whole process, however, you should make careful note of the materials used. The Latex interior wall paint will give traction that is closest to that of most home sets. You might find, after you have raced on our new plywood track surface for a few months, that you still need more traction. If so, you can paint on another coat of the latex paint (be sure to clean the track first) adding about two tablespoons of a fine abrasive powder to each pint of paint. The better paint stores carry a wide choice of powders that will cause the paint to dry with a very rough, sandpaper like, surface.

The best of these is a product called VINYL AD-MIX, sold under the "Synko" brand label. Second choice for a surface "roughener," would be fine ground walnut shells, and third choice would be common, fine ground, pumice. The Vinyl Ad-Mix seems to most closely match the "grip," or traction, of the plywood track to most home sectional tracks. We would recommend copper tape over aluminum tape, or braid, for this particular type of track — and we've tried them all.

NOTE: Each of the straights you make from plywood, must be the exact length of a multiple of the length of the straight sections in your racing set. If, for example, your home set track is 12½ inches long, then you should make the new straight piece either 25 (2 x 12½), 37½ (3 x 12½), 50 (4 x 12½), or up to 87½ (7 x 12½) inches long. This will allow you to substitute the new straight section(s) for the regular plastic home set track, without any problem of lining up the new plywood extension pieces and the original straights and curves.

BILL OF MATERIALS

Quantity	Description	Price	Source of Supply
1 panel	4 ft. x 8 ft. ¼" thick grade "B/D" interior plywood	\$ 3.00	Lumber Dealer
1 roll	½ inch x 90 ft. roll copper tape, self- adhesive back	\$ 5.00	Raceway Dealer, or Autoworld, 121 Jefferson Avenue, Scranton, Pa. 18503
1 quart	Latex interior wall paint in black or grey	\$ 2.00	Paint or Hardware Store
2 boxes	¼ inch carpet tacks (approx. 100)	\$.50	Hardware Store
1 bottle	White Glue (¼ pint)	\$.40	Hardware Store
GRAND TOTAL		\$11.90	



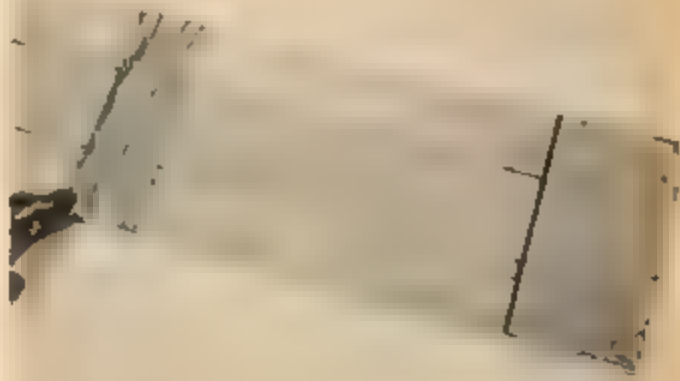
The bill of materials gives a complete list of everything needed for adding straights to your home set track.



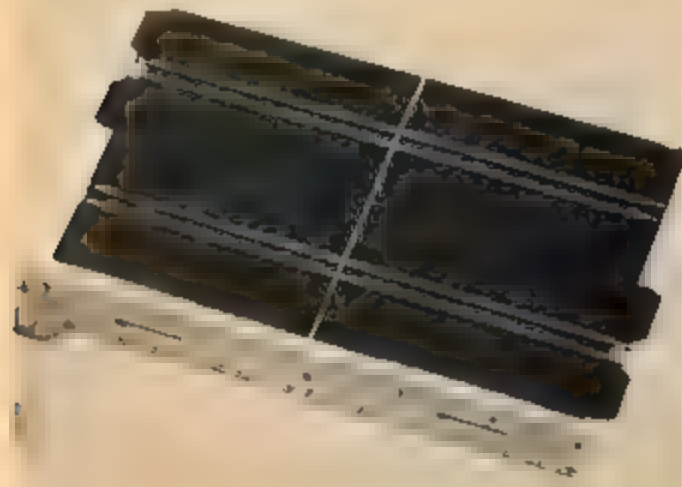
Use a section of the track from your home set to mark off the width of the area between the edges of the slots on $\frac{1}{8}$ " plywood.



For long straights, mark off 5 center strips the width between the slots, and 10 strips 2-inches wide, on the 4 foot edge of the 4 foot x 8 foot plywood panel, so each strip will be 8 feet long.



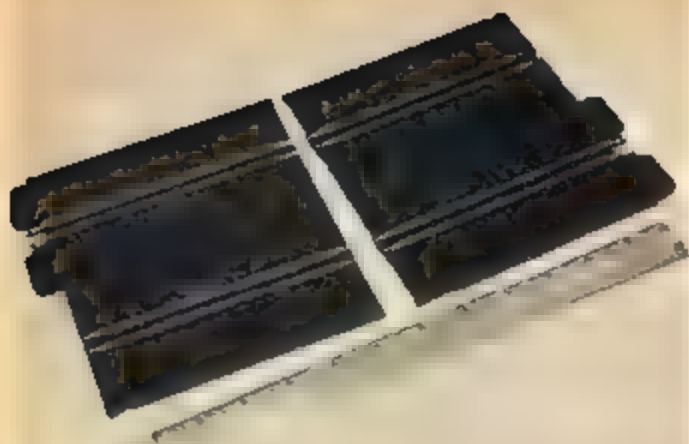
For shorter straights, you can cut the strips of $\frac{1}{8}$ inch plywood to fit the length you need. Lay them side-by-side, then cut cross braces, about 2 inches wide, to fit across as shown.



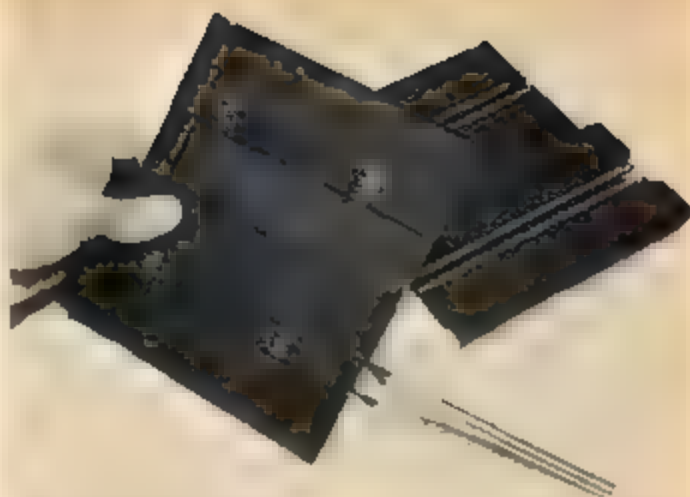
Measure the exact center of one of the full length straight track sections from your set. This section happens to be Strombecker, your brand may look a little different.



Use a razor saw to cut exactly on the line you just drew across the middle of the track. Keep the saw at the angle shown to help to keep the cut straight. Cut right on through the metal pickup strips and all



On some brands of track the metal pickup strips may work loose when you cut through the section. If yours do, clamp them back down using the original tabs, or, if there are no tabs, epoxy them in place.



Trim away all of the rough edges left over from the saw cutting. Use a sharp hobby knife, and be sure to clean the edges of the slot.



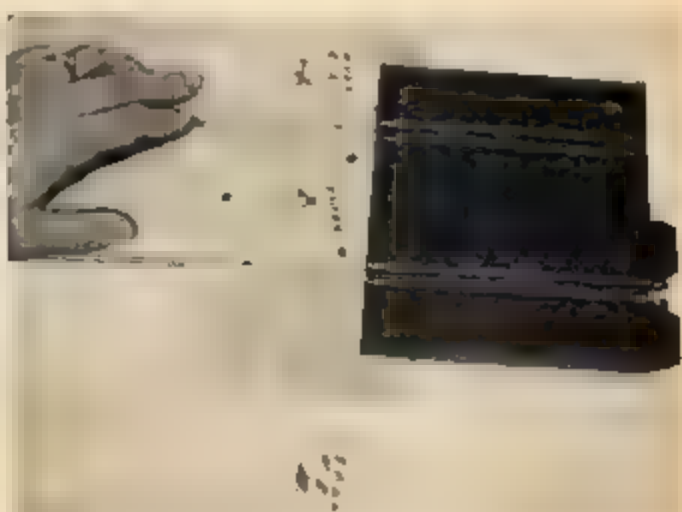
Drill some 1/16 inch holes in the track, for the carpet tacks to go into. The holes should be about 1/4 inch from the edge of the track, and 1/4 inch from the edge of the metal pickup strip.



Center one of the half sections of track on one of the plywood cross pieces, and about one inch over the edge, as shown. Drive a couple of the 1/4 inch carpet tacks about half-way into the plywood to hold the section of track in place temporarily.



Butt one of the center pieces of 1/2 inch plywood against the track section. Apply a little white glue between the two pieces of plywood, and tack the two pieces together with the carpet tacks.



Line up the 2 inch wide pieces of plywood with the outer edges of the slots on the track section, and then glue and tack the 2 inch pieces to the cross brace. Use only one tack to hold the side pieces for now.



Now, move to the other end of the new long straight. Line up the strips with the other half section of track, over a cross brace.



Apply white glue between the plywood strips and the cross brace, then tack the strips permanently in place with the $\frac{1}{4}$ inch carpet tacks.

STRE-E-TCH THAT TRACK



Carefully pry up the carpet tacks holding the sectional track pieces on the ends. It will be much easier to paint the plywood without these pieces on the ends.



A 2-inch wide cross brace should be tacked and glued to the bottom of the new straight about every 18 inches. Our sample section is only three feet long so only one cross brace was needed.



Apply a good, thick, layer of Latex interior wall paint to the plywood track section. We chose black to simulate a tar-topped road, but grey, to simulate concrete, would also be suitable.



It is important that you get the Latex paint into all of the cracks and seams of the plywood, even in the slot itself.



After the Latex paint has dried overnight, the two half sections of set track can be permanently attached to the unit plywood straight, with four of the $\frac{1}{4}$ inch thumbtacks.



The copper pickup tape has a paper backing that must be peeled away before you can stick the tape down. Peel away a few inches of the paper.



Press $\frac{1}{2}$ inch of the copper tape over the end of the sectional track, then, press the tape down over the original metal pickup strips. Press the tape onto the edge of the slot between the plywood sections, leaving $\frac{1}{32}$ of an inch between the edge of the tape and the edge of the slot.



Slide the handle of a pair of pliers or cutters over the tape to press it down firmly to the plywood. Apply one continuous strip of copper tape to each side of each of the slots.



Our homemade straight section can cost as little as 30-cents a foot. Factory-made track ranges from 74-cents to over 2-dollars for two lanes of $\frac{1}{32}$ or $\frac{1}{24}$ scale racing.



WOULD YOU BELIEVE

By Don Emmons

Photos by Don Emmons

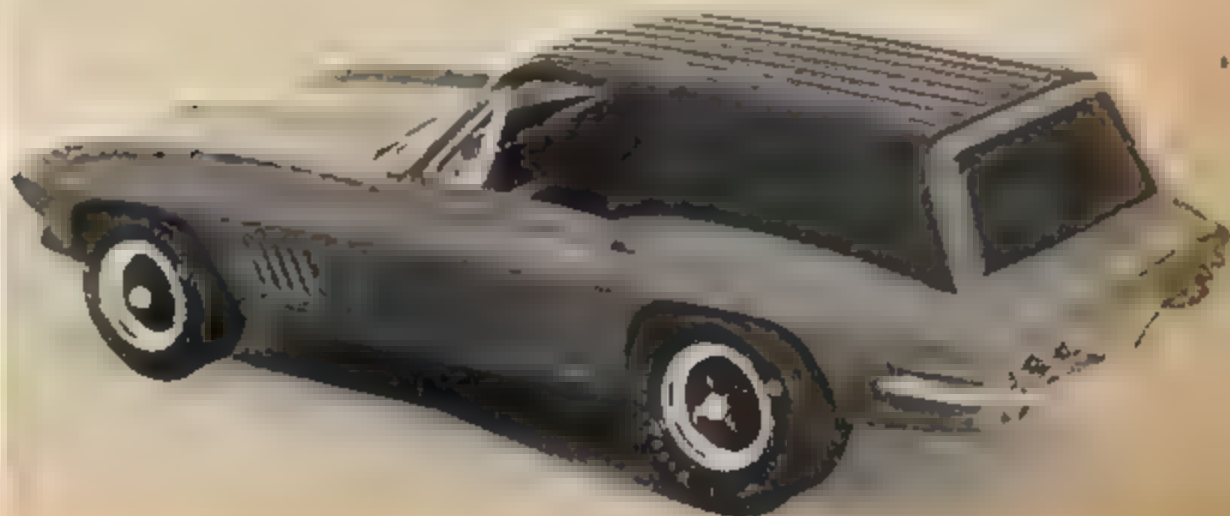
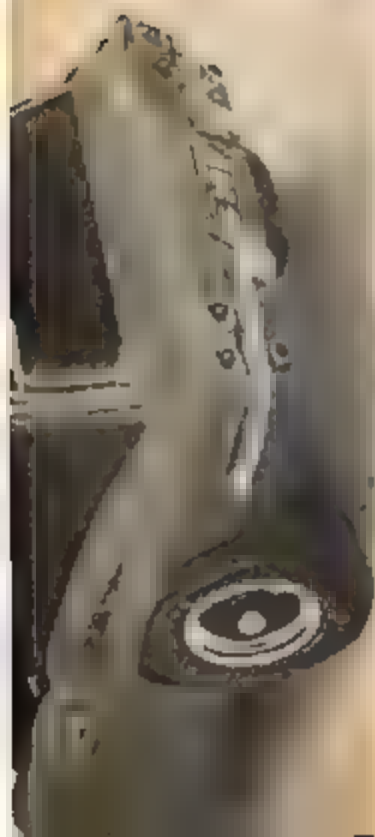
LOOKING FOR A HIGH-STYLED
HAULER. . . THIS HAS GOT
TO BE THE MACHINE!!

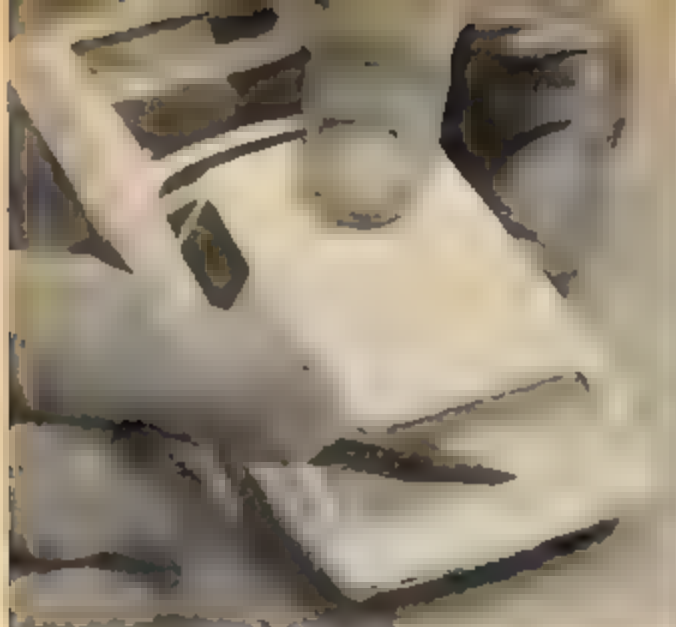
A CORVETTE PANEL WAGON?

When I opened the box of AMT's '67 Corvette Convertible kit and saw this custom panel top, I went wild. I thought, "what a groovy pulchritudinous panel," and immediately set about fitting the two portions together. My only comment is that the body should be altered to take the top instead of just setting it on. It was a relatively easy matter to make this alteration and did not take a great deal of time, either. The biggest job will be reworking the rear portion of the interior section. This was made from thin sheet plastic; however, you could

use a piece of a file card. File card works fine and can be glued; but, naturally, this does need some priming to get a good paint job.

The interior was sprayed flat black with the car held back to give a stippled effect. The seats and dash were shot holding the can a little ways away which gave them a different finish. Wheels are chromed Cragar's with the spokes painted flat black. Chrome door handles, windshield, and emblems are all painted with chrome. Silver Tires are from Industro Motive's Indy kit.





Hold top in exact position and mark along inside edge of top. Be sure to mark all the way around edge.



Place saw blade in Jeweler's saw backwards and cut along pencilled line. Do not cut out too fast or plastic will get hot and break the blade.



Now that area has been cut out, file the edges and place top back onto body to see if more must be taken off.



Work carefully when removing the visors so as not to break the windshield frame. Removal of these makes the top fit better.



After all edges have been filed smooth, make a last trial fit and set top aside for now.



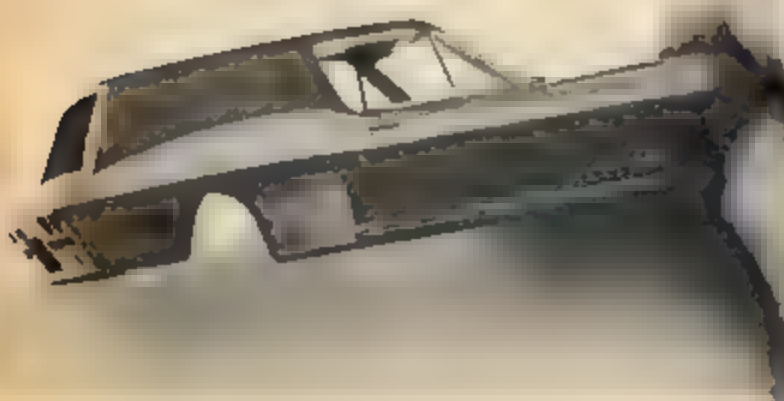
You will notice that a line was left which is part of the lid for the convertible top. Putty this in now. When dry, file smooth and glue top in place.



Now that body is cut away the interior should be worked over to fit the new top. Cut off the rear portion. Use a Razor saw for this if possible to assure an even cut.



Use either sheet plastic or file card to lengthen out the rear portion of interior. Place small strips over the wheel well sections, also.



Body was painted red and let set for a few days before taping off lower portion leaving top clear. Flat Black was used to duplicate vinyl top.



Gold pinstripping tape is placed on top of strips on top. The 1/8 inch wide tape fits the cast areas perfectly.



Flat Black was used for the interior section and was detailed with Chrome Silver paint. Steering wheel ring was painted Flat Brown to simulate wood wheel.



CUSTOMIZER'S WORKSHOP

By
Harry Bradley

Styling ideas from top modelers

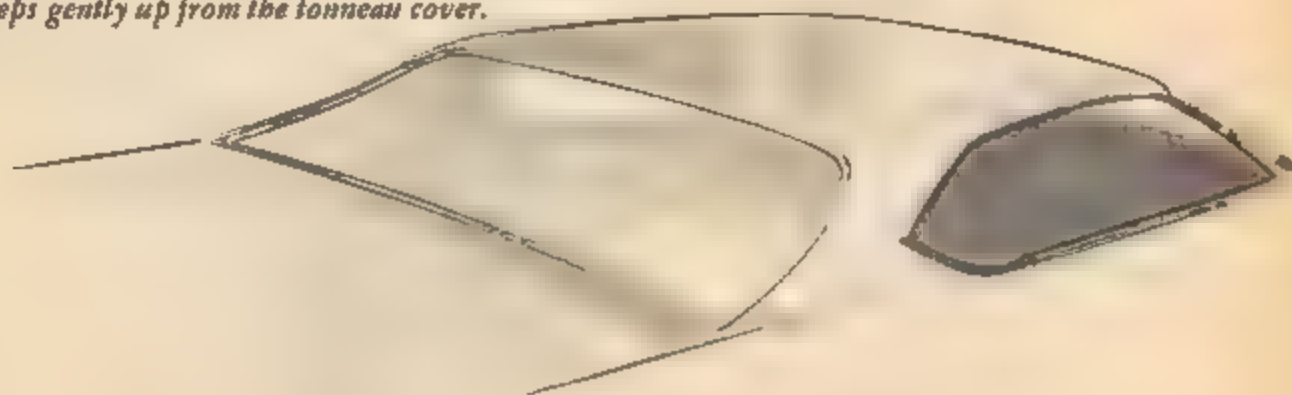
The Dodge Deora pickup has become one of A.M.T.'s fastest selling hits and judging from the first showing of the full-size Deora in early January the truck is likely to be an outstanding hit at shows across the country. In Detroit it set a record at the annual Cobo Hall Rod & Custom show for the most number of trophies ever won by a single car!

I designed this vehicle two years ago for the Alexander Bros. and supervised much of its construction. As the vehicle began to take shape, we wondered how the Deora would look as a dragster, a surfer wagon, or an open roadster-type pickup.

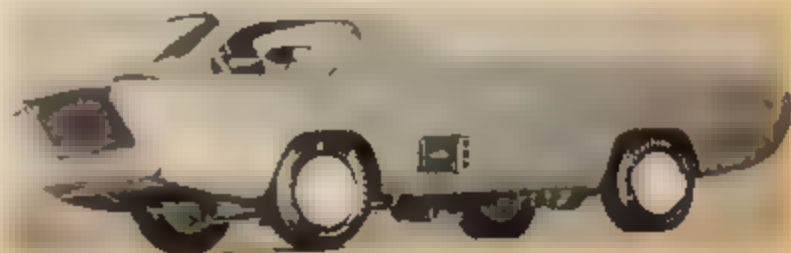
For this first article let's take a look at some of these variations—each of which can be accomplished by using one or two parts from another kit or by building the new design up with scrap plastic and putty.

In our next article we'll actually begin with a real kit which Craig Reynolds will assemble and customize. Craig is an excellent craftsman with some wild ideas. I will also include drawings to help you understand what modifications are being undertaken. Now, on with our Deora...

The big surprise about the Deora is the cab — it's low, way up front, and very sleek. Shown here is a 1963-64 Pontiac Grand Prix rear window (and portion of the roof, as well) grafted onto the stock cab. It sweeps gently up from the tonneau cover.



More up-to-date is this roof style which is basically a 1966-67 Chevy Caprice coupe. You can get fully assembled models of this car from your Chevrolet dealer. A stylish variation is the location of the vent-window at the back of the side window area.

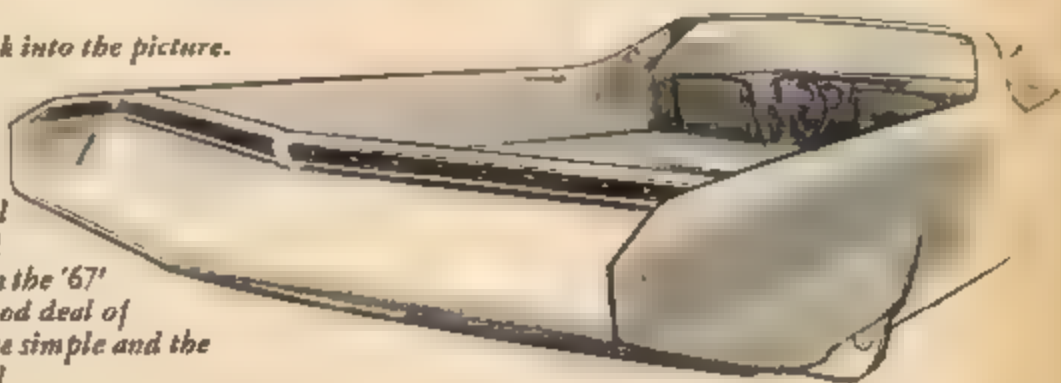


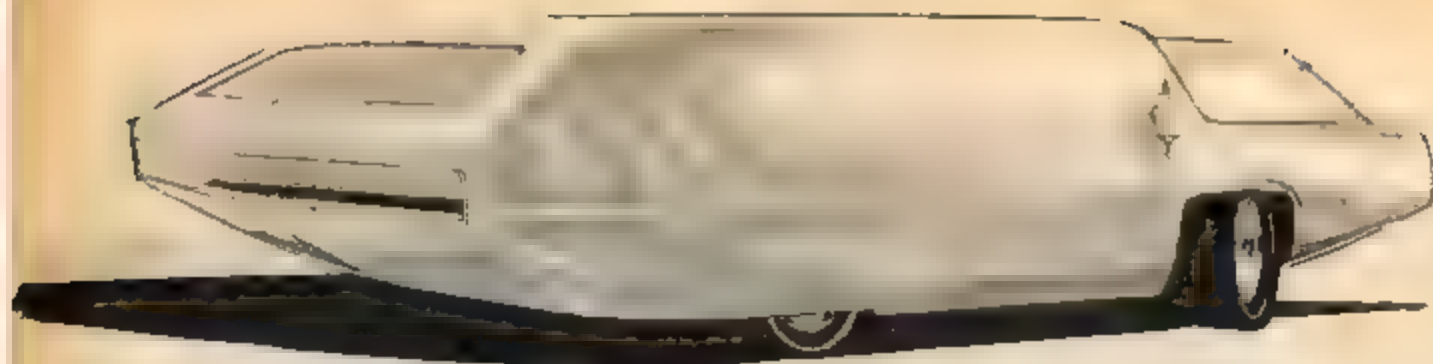


This one's for the advanced model-makers. A wrap around rear window with a 'V' break at the center is the big feature. The side window has also been recontoured at the rear to form a vertical rail panel.

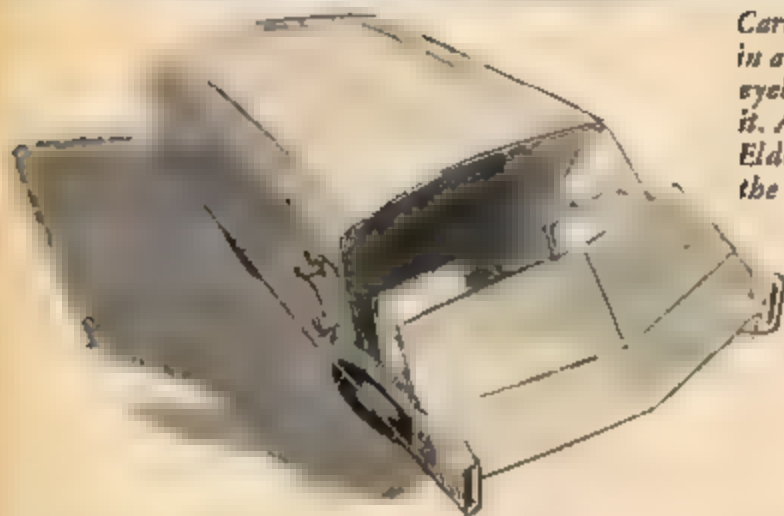


Now let's take the whole truck into the picture. Essentially here we've cut the roof away and used a racing windscreen and roll-bar arrangement, (from the Charger I kit). The rear wheel is covered with a sculptured shape similar to that found on the '67 Pontiac. Up front there's a good deal of hand work, but the shapes are simple and the same is true for the back end.





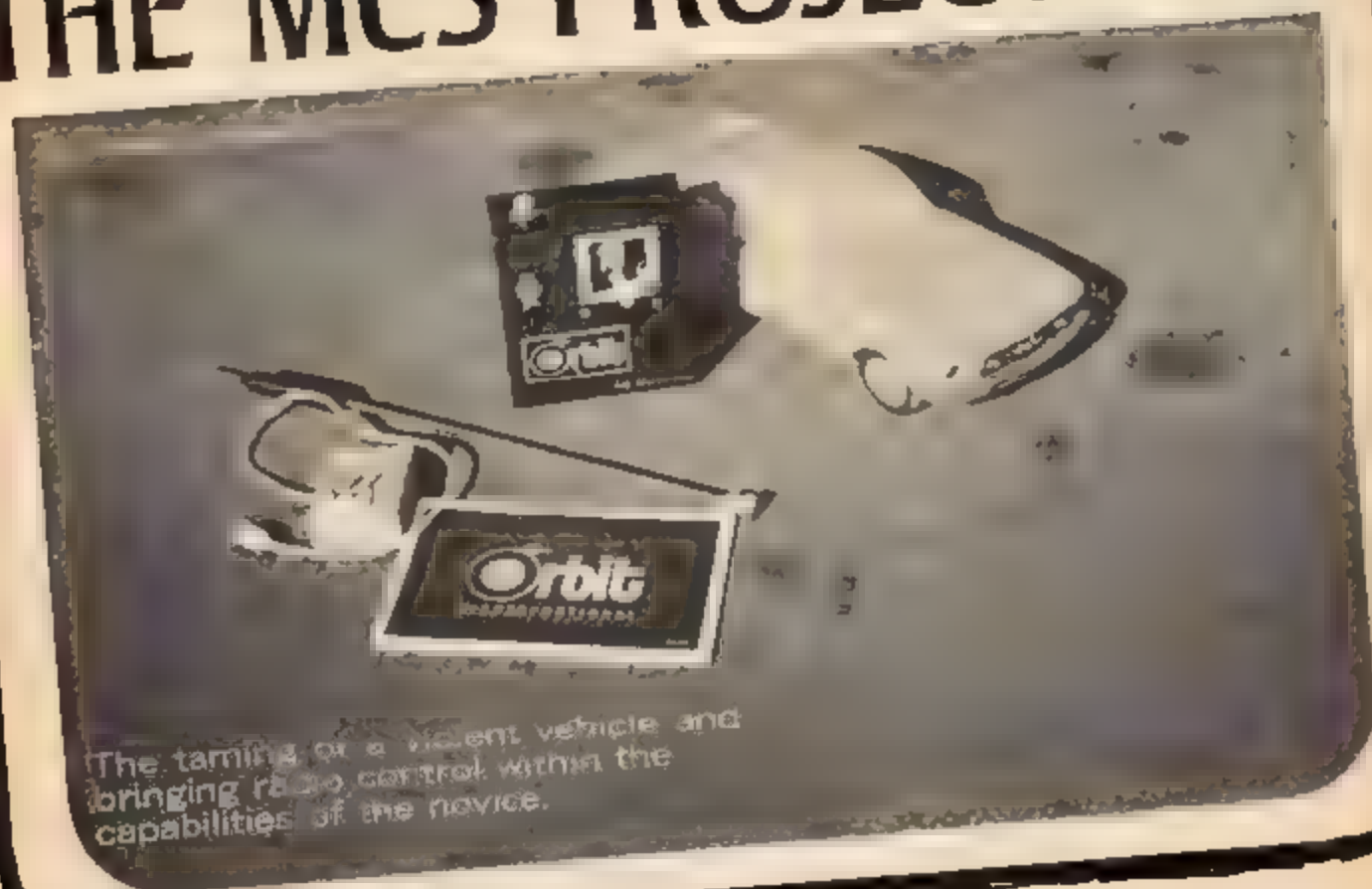
Carry your surfboards in style, deliver the groceries in a first-class panel truck or just raise the neighbor's eyebrows! This panel version of the Deora will do it. A stock back end sweeps up to a 67 Cadillac Eldorado rear window. Flush fender skirts accentuate the new panel body style. An open landau roof over the driver with a roadster-type windshield/vent window arrangement is a distinctive touch. The carriage lamps on either side of the roof can be found in some of the large roadster kits.



This we couldn't resist. The body's been shortened bringing the axle closer together. Not intended for "wheelies," but rather good highspeed dragging this Deora is stripped down for action. The blown Hemi is aft of the rear axle and faces backwards. The absence of a tailgate keeps air pressure build-up at a minimum.



THE MCS PROJECT CAR



The taming of a violent vehicle and bringing radio control within the capabilities of the novice.

Last month MCS featured the first of a two-part series on the painful evolution of an experiment. We had long deplored the lack of a driveable, gas-powered automobile that would fit in somewhere between a slot racing car and a go kart — something big enough to give a driver real “seat of the pants” controllability but small enough that its construction would be within economic reason and that the car could be run — no, *raced* is a better word — on a small and easily available area, say a tennis court or a home driveway.

The eventual goal, as we foresaw it, was an operable 1/8th scale machine, radio controlled and equipped with throttle control, full steering, brakes, and all the niceties that a real car has — except the bulk of real physical size. Chosen to construct our Project Car was an Kagihara, an RC-plane builder and operator of no little renown and past holder of several international U-control flying records. With Ian's history of RC building and his flying of planes (to say nothing of his extreme success with hopping up racing go kart two-cycle engines), we knew that he would eventually have our Project Car off and running.

As was summed up in last issue's instalment, the car is presently operable, but in order to work the bugs out of the combining of a gas engine, RC gear and a steerable chassis we shortcut some of the original, admittedly over-

ambitious plans and went out for a test hop minus brakes, suspension (both found to be necessary) and a body. In short, we had an operating chassis with steerable front wheels and throttle control (at least we could control forward and reverse movement).

The thing ran like gangbusters; right off the pavement and into the weeds! Much had to be done engineering-wise to bring the car under total driver control, but we had at least proven that our approach to a prototype chassis was along correct lines and with more fiddling we might just wind up with something our readers might be interested in duplicating.

Readers of the initial instalment will recall that maneuverability of the Project Car was difficult, due primarily to the speed of the machine which, at engine idle, was somewhere near 30 actual miles an hour! We had had to guess at lower gear reduction between the .090" Cox engine and the wheels, for we knew not if the potent little mill had the oomph to propel the admittedly heavy car without stalling. It ran, and how! but the transmitter operator experienced difficulty of control for the car traveled so far so fast, that steering around obstacles was well nigh impossible.

We discovered that some sort of clutch between the

engine and the wheels was mandatory, but until a commercial unit is forthcoming we decided to substitute our Orbit 3 + 1 proportional outfit into a much more docile vehicle and practice our control reactions before subjecting the rapid gas version to further high speed tumbles.

Bulder Ian Kagihara thus picked up a Wen-Mac 1/12th scale model of a 1967 Mustang at a Ford dealer for \$5.95. The cost was small in relation to the car for while it is produced as a toy for the progeny of full-size Mustang enthusiasts, it is as exact a replica of the real thing as any available. It comes not in kit form but ready to roll, and it's equipped with steerable front wheels and a small electric motor geared directly to the rear axle which runs off two flashlight batteries.

While the Mustang body is molded plastic, the separate chassis is stamped metal with full Ackerman steering and rubber-tired wheels that turn in Nylon bushings. It was a simple matter to connect one of the Orbit servos to the steering tie rod and the other to the reversing switch so the car could be backed or sent ahead at will, and at the same time turned in any direction through the full travel of the steerable front wheels. A third action is possible, that of a variable-speed throttle through a rheostat, but in this first edition of our temporarily-electrified RC Project Car we decided to take just easy steps at a time. Handling the directional control problems at the outset proved enough of a problem for MCS staffers who are, in truth, pure novices at the grand art of radio control.

We hated like crazy to have to pull in our horns for the very reason behind the experiment was to try and produce a car that possessed the unadulterated torque of a gas-fired powerplant, gave the feel of real racing and, above all, was free of a slotted lane and under the total guidance of the "driver." But complex mechanics and intricate electronics are best taken in small doses, thus our plans to go racing were shelved (temporarily) and we settled down to simple rallying speeds.

The Orbit 3 + 1 RC system we are using offers four independent controls. And it offers them in infinite variation rather than in incremental settings. The transmitter is operated by a single control stick which actuates the primary control functions. It can be moved in any direction and gives true gimbal control, and can even be swung in a full 360° circle. With the stick pushed straight ahead from its self-locating, fail-safe, central position, a servo is actuated, through the receiver (in the car), which similarly moves at the same rate as the controlling stick. It does the same thing when pulled back. Too, it controls a second servo when moved to the left of center or to the right. By moving the control stick diagonally from center, it simultaneously actuates both the servos. Designed for use in RC planes, the Orbit as we have installed it in the Mustang is rigged to propel the car forward and back through forward and back movements of the stick, and to steer it left or right through left or right movements.

Simplicity in itself, and one NEED NOT know the intricacies of electronics nor radio transmission to procure, install and operate the system. Forget the complicated diagrams that one usually sees in connection with do-it-yourself electronics. Merely open the box, pick up the assembled components, and -- there you are. The few wires that must be connected before final operation are foolproof; each is equipped with a multi-pronged plug which fits its mate in one way and one way only.

Additional controls on the Orbit transmitter are two knobs on the side of the box-like case, and an on-off switch on the face whose function is obvious. The knobs

Coming at you through a slalom course, the Project Car twists through a series of esses with nary a blooper.



control what is known as "servo excursion." That is, they determine fine adjustment of the servos so that each may be dead-centered when the control stick rests at center. They need only periodic adjustment and infrequent use to keep the servos properly aligned.

The Orbit 3 +1 system comes with a battery pack, a special unit of four 600 milliampere-hour capacity nickel-cadmium, sintered plate cells similar to pen-light cells in appearance. They'll operate continuously from full charge for two hours. A charger accompanies the Orbit package which, when plugged into an ordinary household outlet, brings the batteries up to full capacity in a maximum of 18 hours.

Power to propel the car is via two ordinary Eveready flashlight dry cells providing a maximum of 1.5 volts each.



The 1/16th Wen-Mac '67 Ford Mustang is a faithful reproduction of the real thing, including detailed engine visible when hood is raised. Original model came with operating headlights but system was eliminated for use of the space by RC equipment.

The three aggregate volts drive the car at approximately a scale 20 mph. We will increase our speed significantly by the substitution of rechargeable battery cells which will permit the utilization of a full ten volts, but at the outset we settled for the more docile performance in order to acquaint ourselves better with the RC controls.

The most confusing part of RC control, to us at least, made itself evident right at the beginning. When the car is traveling away from the operator, it is a simple matter to move the stick right or left to make the car react in a like manner. But when the car is coming toward the operator, control is reversed. That is to say, if you want the approaching car to steer to your left, the control stick must be pushed to the right. The same problem confronts first-time RC plane jockeys and instructors recommend, at least until the novice acquires the dexterity of an experienced "pilot," that when the plane approaches, turn your back to it and look over your shoulder. In this way, right is right and left is left. Same thing with the car. Face in the direction it is traveling at all times which means, again, turning your back on it when its coming toward you. Unlike a fast-moving airplane, it only takes an hour or so of experimentation before the operator is able to envision himself in the car (rather than standing in one place) and steering left or right becomes virtually automatic.

The receiver, the batteries and servos as installed in the '67 Mustang model up the scales at 17 ounces, a minimal weight for the size of the driving motor. Arrangement of all the components is pretty much optional; one servo is located where it is connected to the steering tie-rod, and the other where it couples with the drive motor's forward/reverse switch. The receiver itself and its batteries



Steering servo moves tie rod from full left to full right through steering range. Proportional RC permits infinite positioning of wheels, instead of incremental.

are well padded in foam rubber to minimize operational vibrations and harmonics, and they are located at the center of the chassis or within the roomiest area of the car's body. The drive motor and its batteries are mounted in the stock Wen-Mac location, the motor crosswise just ahead of the rear axle, and which drives the right rear wheel through a series of reduction gears, while the two flashlight batteries are mounted at the back in what constitutes the Mustang's trunk.

None of the works are evident when the swing-up body is closed down over the chassis since we frosted the simulated windows of the fastback.

The illusion of the operating car is one of complete realism. The car can do just about what a real one can — move ahead in a straightline direction or in any degree of arc to the left or right within the limits of the steerable wheels' side to side travel. Similarly it can reverse in a straight line or in any segments of an arc to the left or right.

Naturally, and as with RC operated planes and boats, the car must be within the operator's view at all times. This is not quite the problem with an airplane flown in an unobstructed area where it is silhouetted against the sky. But the car can disappear behind a small obstacle or become "lost" against the ground background. For this reason, a free-room area, paved of course, is the best place to run the car and if it is of a considerable size, the operator would do well to elevate himself to increase his sight. The Orbit system will function perfectly even when more than a half-mile separates the car from the operator, but the car, of course, cannot be seen this far with the naked eye.

The central positioning of the transmitter control stick in what is called "fail-safe" position, negates the servos. They will return to their dead-center position which in the case of the car means the steering wheels will center themselves and the motor will be switched off. Once again unlike an airplane, which must contend with ups and downs as well as side to side directions, the car only concerns itself with steering. If the car is lost to view or the operator cannot unscramble his reactions in time to avoid an imminent crash, just release the self-centering stick and the vehicle will stop unharmed.

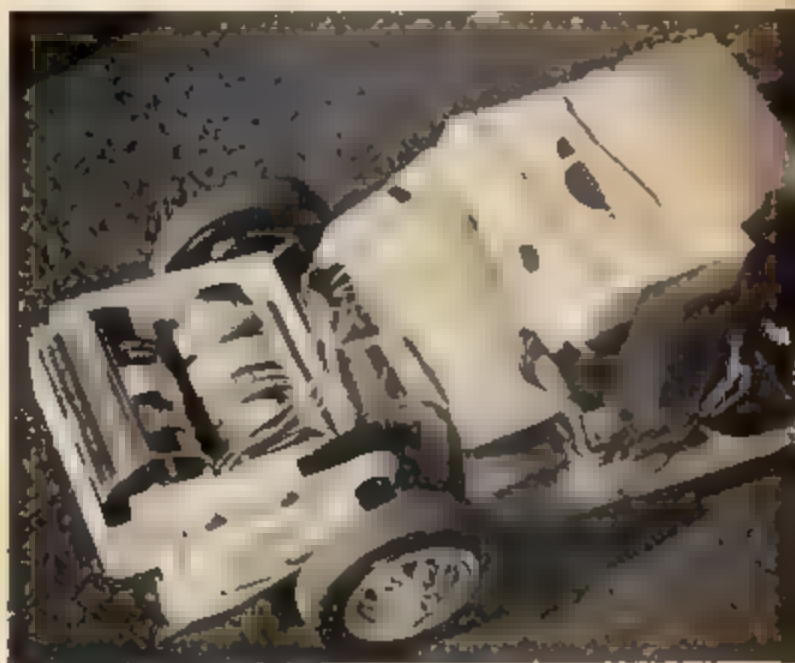
When we become better acquainted with the car's operation we'll add throttle control through a rheostat and also the aforementioned ten-volt battery system. Then we

will be able to control the speed of the Mustang from a dead-slow crawl up to "flatout" — in either forward or reverse. In other words, the car's speed will increase in direct proportion to the distance the control stick is moved ahead from, or back from, central position. Right now, it has just a single speed in either direction.

Meanwhile, work on the gas-driven, 1/8th scale version continues for, after all, that is the purpose of the MCS Project Car. But we're grateful for the temporary breathing spell and the chance to acquaint ourselves with RC operation without undue risk to the car (or its driver).

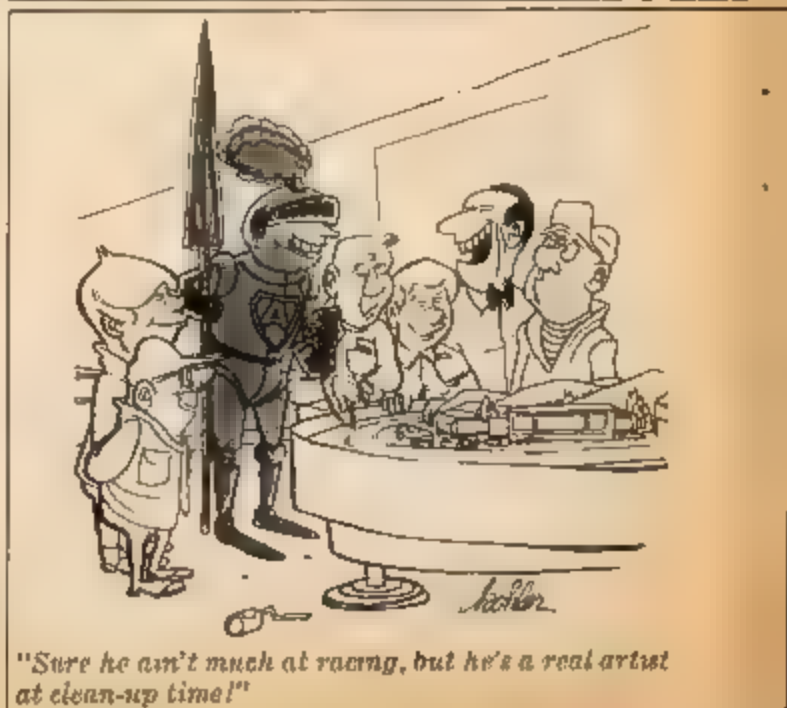
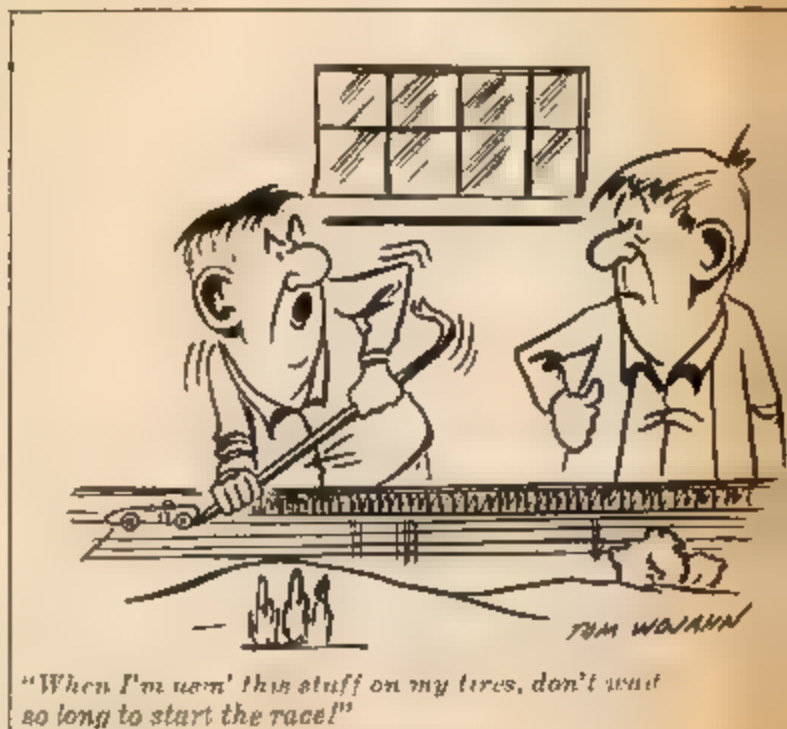
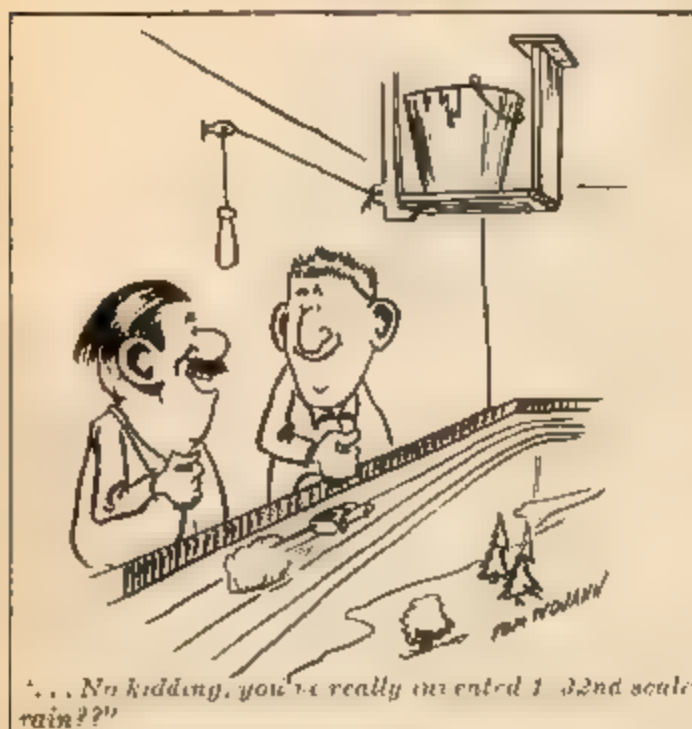
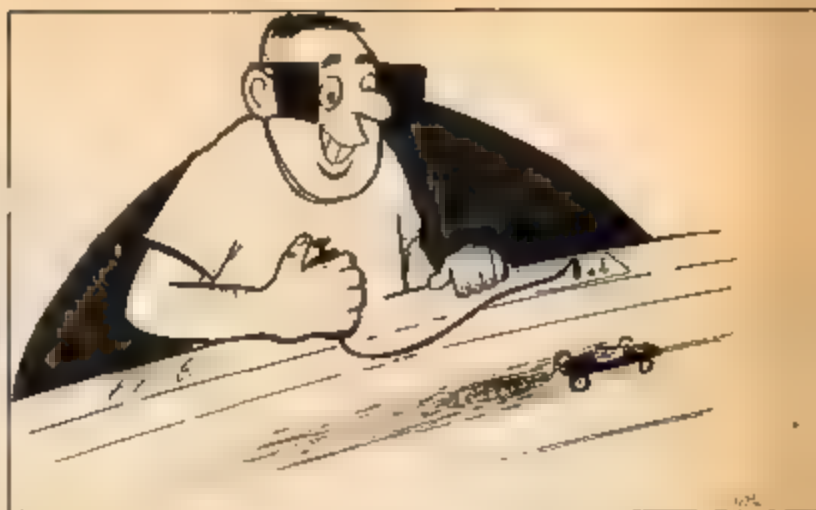
We'll keep our readership informed on our progress periodically as new developments and innovations arise. In the meantime, Editor Jim Bambrick will welcome with open arms any and all letters or cards from MCS's regular audience who wish to know more about the intricacies of radio controlled models.

Garden variety flashlight batteries behind rear axle power drive motor. The aggregate three volts drive car satisfactorily, but triple speeds are available with substitution of Nikad units which will fit in same space.



Body hinges forward to reveal metal chassis and running gear with RC equipment installed. Receiver is well packed in foam rubber to minimize vibration of delicate parts.





gas! A Loewy designed body over a hairy Chrysler V-8. What a shelf-model this one is!

In slot from Revell, the big news was their 1/32 Camaro and Mustang 2 + 2, both '67's of course. \$6.00 kits. Nice price, nice cars. In 1/24, they've got a 1/24 Super Squalo 555 Ferrari GP car, for \$6.00! How in the devil do they swing this kind of car for that kind of price? I'm gonna run over there and buss all of them on the cheek! And talk about raceways! Never saw so many from any company. Don't have the room to credit them all — a shame. Look at them at your dealers. They've got a few accessories that are really worthwhile though! Like a 90 degree Daytona curved bank, for all Revell home sets, \$10. A 180 degree Monza wall goes for \$14.00. Lap counters? Neat mechanical job for their tracks — \$4.00. Individual reset for each lane. Electric counter is really something — goes for \$15.00, complete with counting straight. Looks great.

Ulrich has a new line of flat

paints for the scale buffs. What can you say about the best? You'll see them at your store soon. And their beautiful mag wheels in matched sets of front and rears are just too much! Shod with closed-cell grey spongies, they're quality at a low price — \$1.29 a pair for rears, 89 cents a pair for the fronts, take your pick up 1/16" hole or 5-40.

And now — PermaScene with the color already mixed in. It's called "Perma-Tex." You get 16 ozs. for \$2.00. Great for scenery building. Now ol' Speedy is gonna do you fellows a favor. You've been screaming for the address of this outfit, here it is. Permacraft Products, Inc., Dept. MCS, 550 E. Erie St., Painesville, Ohio. Tell them Speedy sent you.

Radio control on a budget? Could be! Aristo-Craft Distinctive Miniatures, Dept. MCS, Newark, N.J. 07114, has a complete ready to run radio control car, with transmitter and receiver, for \$39.95! Caramba! Also, if you're interested in the briney deep, the same rig in a boat goes for the same price. Their catalog is darn

interesting. Drop them a line and ask for it.

While on the subject of R/C, what would you think of a 45" radio controlled sailboat! Or if you don't dig sailing, how about some high powered hydroplanes. Yeah baby, radio controlled! Well this kind of excitement is available now, from Dumas Boats, Box 6093, Dept. MCS, Tucson, Ariz. 85716. They've got a whole fleet of tremendous boats. And you just have to see a gas powered, radio controlled hydroplane to believe it! Write for their catalog.

Have to mention one more company that makes R/C goodies. Top Flite Models, Inc., of 2635 S. Wabash, Dept. MCS, Chicago 16, Ill. has a line of R/C airplanes and associated gear, that is out of this world. They're priced right too, and a ball to build. Sure they've got a catalog, for the asking.

You'll be seeing tests and evaluations of all of these new items in future issues of MCS, the world's number one "Glad Rag." Hang in there people — '67 is gonna be a real gas!



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